/u/fortune* *news. . .*

Newsletter for Users of the Fortune 32:16 Computer **Volume 2 Number One**

Uninterruptable Power Supplies

Like most other appliances, the Fortune computer will not operate without electric power. Many of you may have put the plug in the wall socket without considering the intricacies of the ac power supply. We rely on the public utility to deliver a steady level of uninterrupted power. However, things like blackouts or erratic changes in voltage level will interrupt the power supply to your computer while it is operating and this may have serious consequences, including the loss of everthing currently stored in working memory or, even worse, damage to your computer hardware. What can you do to make sure that this doesn't happen? Most users already own a transient, or surge suppressor. These devices are relatively inexpensive ($30-$100) and will filter out spikes that could cause potential harm. But they are of little use for brownouts (low voltage) or power failures. If you are located in an area where these problems are frequent, you need extra protection. The solution is straightforward. Just buy the device that is produced to prevent this from happening -- an uninterruptable power sypply (ups). But that is easier said than done, since there are many factors that must be considered before an informed decision can be made.

A ups ensures that your computer will receive uninterrupted power at the required voltage level. Essentially, a ups is a battery that sits between your computer and the power supplied by the public utility. Two kinds of ups -- continuous duty and standby -- ensure this in different ways. A *continuous duty ups* is continuously supplying power to the computer even as it is continuously being recharged by the power from the public utility. If and when the public utility fails you, the unfazed ups will continue to supply power until its battery is drained. This should be more than enough time for the utility to come back on line or for you to take appropriate measures (e.g. shut your system down). If it is only a momentary fluctuation, you will be able to continue working as normal. A *standby ups* monitors the power being supplied by the utility; but it only comes on line, supplying power to the computer, when it senses that the utility isn't delivering what it is supposed to deliver. A drop or fluctuation in power below or above a pre-set cut-in level will trigger the standby ups and presto! -- uninterrupted power.

Remember, though, that the ups only has a finite amount of power -- usually only ten to fifteen minutes worth. It won't be useful for a three-day blackout. It is important, then, to consider the power rating of any ups thay you may purchase. How long will it last once power from the utility has stopped? You also have to consider the wattage of the ups. It is important to have a ups with a high enough wattage or power rating -- if it's too low you're asking for trouble. For a standby ups, what is the reaction time (usually measured in cycles) before it cuts in? Is this appropriate for your computer? Do you buy a standby or continuous duty ups? Clearly, the latter is preferable since you don't have to worry about reaction times. There is a catch though. A standby ups is much less expensive. Can you get by with the cheaper standby type? Last but not least, it is important to know who services the ups. You want to be sure that there is someone within reach in case there is a failure in the device that is supposed to protect you from the consequences of power failures.

See **Power Supplies**, page 2

Featured in this Issue. . .

Multiplan Help--Some Useful Models

Many of you have mastered the MULTIPLAN spreadsheet for one application or another, with that lingering intention of building other models. Whether you have put off doing so for lack of business applications knowledge, lack of knowledge about the spreadsheet software itself, or simply for lack of time, *MULTIPLAN Models for Business* can help.

Published by the Que Corporation in 1983, and written by Douglas and Gena Cobb and Thomas Henderson, *MULTIPLAN Models for Business* contains 20 useful templates, or models, for various home and business applications. For example, the book provides models for balancing and spreading a checkbook, amortizing a loan, calculating ACRS Depreciation, and producing a comprehensive financial statement. Sure, we Fortune users are a bright bunch and could figure it all out for ourselves, but why reinvent the wheel when we are all short on time? The models presented in the book are useful and well conceived; and they are presented in a clear and logical manner. For your convenience, we have listed the 20 models below.

Each model comprises a separate chapter. Each chapter begins with a section called "Principles." Here, the authors explain the logic behind the application. For example, in the chapter on Managing Cash Flow, they explain the notion of receipts and disbursements, and provide discussion on the value of doing "what if" analysis. These sections are useful to those, like me, with limited accounting background.

See **Multiplan**, page 3

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From the Editor's Desk

In the future, we will introduce some new columns that will appear periodically in /u/fortune news. These include "user Profile", which will provide in-depth articles about the way some users employ the Fortune computer in their daily business, and "Software Update", which will announce the latest updates of software produced by Fortunes Systems Corp. In addition, we plan to introduce "/u/follow-up/article" where we will answer readers' questions about articles that have appeared in previous issues. Readers are invited to write (or call) us with any questions they may have about previous articles. This column should be distinguished from "/u/help" which will either respond to other reader inquiries or provide a forum for our readers. If you have any ideas for topics that should be covered in future issues or if you like to write an article for /u/fortune news, please let us know. We will identify and credit any articles written by our readers. As we mentioned in the last issue, we are planning to publish a list of Fortune user groups. If you are out there and we don't know about you, please let us know. Everyone will benefit from a large network of users who can help each other. Last but not least, we will soon be forwarding a survey questionnaire to you. Please give this your careful attention. We would like to get a profile of the ways in which the Fortune machine is used so that we can appropriately respond to readers' needs. In addition, you will be asked whether or not you would like to have your name on a mailing list. We have already received requests from vendors for our mailing list but we want to give you the opportunity to say "No" before releasing your name. In any case, the release of names will be strictly monitored.

/u/fortune *news. . .*

Managing Editor Josh Lobel
Contributing Editor Mark Palmerino
Associate Editors Benzion Chanowitz, Mark Rhodes

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/u/fortune *news*, 20a Prescott Street, Suite 28, Cambridge, MA 02138. Telephone 617 876-4763.

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Power Supplies,

Cont'd from page 1

That is a lot to consider. Fortunately, the nature of the Fortune machine limits the number of possibilities and allows us to talk in terms of specific options.

How much power is needed?

A Fortune computer normally draws about 4 amps or 500 watts -- it is therefore suggested that you get a ups that is rated at at least 500 watts or 500 VA. If you have (or plan to add) an expansion cabinet with additional disk drives, it is suggested that you get one capable of supplying at least 750 watts. Many of the supplies have an additional specification called a *power factor* which needs to be multiplied by their power rating. For example, to get the actual power available from a ups with a power rating of 500 watts and a power factor of .8, you multiply 500 times .8 which yields 400 watts. This would not be sufficient for the Fortune.

Switchover time

This issue is a little more complicated. As we have mentioned in the past (volume I, number 6), there are two different power supplies that have been used in Fortune computers -- one made by Zenith and one made by Western Electric. These supplies react differently to power fluctuations. The older Zenith supply is very sensitive, it will generate a power failure signal if there is a half-cycle drop in power. This means the ups must cut in within 3-4 milliseconds. The Western Electric supply is less sensitive. It has a full-cycle detector. This gives you up to 8-10 milliseconds for the ups to cut in. Half and full cycle refers to the 60 cycle ac line current that is supplied by the utility. If you don't understand this, don't worry, the important thing is the cutover time that is given in milliseconds.

If you are not sure which power supply you have, there are a couple of indicators available. The first clue is gained from careful observation of the on/off switch located at the rear of the computer. If it has a white circular marking on it, it is most likely a Western Electric supply. If the marking is a solid white dot, it is a Zenith power supply. Generally the Zenith supplies will be found in older machines. The second clue can be found by opening the computer case and looking at the power supply. BEFORE DOING THIS, SHUTDOWN THE COMPUTER AS NORMAL AND UNPLUG IT FROM THE WALL. The cover can be removed by loosening the six screws from the underside of the cabinet (3 on both sides) and the captive screw on the I/O port. The cover should then lift off easily. Never remove the cover with the computer turned on or plugged in. Serious damage could result. Once the cover is off, look at the power supply which is located along the left side of the machine as you face it. If it is covered with a perforated metal "cage", it is the Western Electric supply. If not, it is the Zenith. Replace cover making certain that it is correctly fitted and tighten screws.

If you cannot find a ups with a short enough switchover time (this could be a problem if you have the Zenith supply), it will be necessary for you to get a continuous ups. Because of the additional expense for a continuous ups, you might consult with your dealer and see if it would make more sense to upgrade to the Western Electric power supply and purchase a less expensive ups. (If you have access to a skilled technician, you might also have some success by disconnecting the PFL signal from the power supply to the motherboard. We suggest you check with your dealer or Fortune before making this change.)

Continued on next page

Noise and Heat:

Two further things to consider when comparing various ups's are noise and heat. Most suitable ups's generate a fair amount of heat and require a fan for cooling. Because of this, they can make as much noise as your computer, or even more. If this is a factor for you, be sure to try the ups before buying it. Because continuous ups's are on all of the time, they are likely to generate more heat and noise than standby versions.

The following is a short list of ups's that should work with Fortune computers:

STANDBY systems (must be less than 4 msec for Zenith power supply)

Model #	Pow Rating	Pow Fctr	Cut-over	Price	backup time
Best Power Technologies (800 356-5794)					
500A	500VA	.8	0 msec	$1,345	10 minutes
Computer Power, Inc. (201 638-8000)					
Computer Power sells the **Defender** series of ups's.					
FPS-120-600	600VA	.8	2-4 msec	$765	20 minutes
FPS-120-800	800VA	.8	2-4 msec	$925	20 minutes
FPS-120-1200	1200VA	.8	2-4 msec	$1,140	10 minutes
Datacomp (703 683-1181)					
400	500VA	.8	1-5*	$885	20 minutes
800	1000VA	.8	1-5*	$1,420	20 minutes
Electronic Protection Devices, Inc. (617 279-0424/800 343-1813)					
EPD sells the **Grizzly** line of ups's.					
500VRS	500 VA	.8	2 msec	$995	10 minutes
1000VRS	1000 VA	.8	2 msec	$1,495	10 minutes

Continuous Duty UPS's (Can be used for either power supply)

Model #	Pow Rating	Pow Fctr	Cut-over	Price	backup time
Computer Power, Inc. (201 638-8000)					
Computer Power sells the **Defender** series of ups's.					
UPS36-500M	500 VA	.8	always on	$1,690	120 minutes
UPS36-750M	750 VA	.8	always on	$1,795	75 minutes
UPS36-1000M	1000 VA	.8	always on	$2,075	50 minutes
Electronic Protection Devices, Inc. (617 279-0424/800 343-1813)					
EPD sells the **Grizzly** line of ups's.					
500UPS	500 VA	.8	always on	$2,400	15 minutes
1000UPS	1000 VA	.8	always on	$5,200	12 minutes
SOLA, Inc. 312 (439-2800)					
56-01-10001-7500	800 VA	?	always on	$1,862	10 minutes

*The Datacomp ups's will also will work with the Fortune with either the Zenith or Western Electric power supply (with the Zenith, Datacomp will need to modify your power supply in order to make the ups work).

If you follow the guidelines contained herein, you should be able to determine which ups will suit your needs. It is strongly suggested, however, that you confirm with your vendor that if the ups does not perform adequately with your computer, that you will be able to exchange or return it and obtain one that does work. We know of users using the SOLA continuous ups (known as the *mini-ups*) and it does work. This model is sometimes sold at a discount from Priority One electronics in California. We invite readers who have had experience with other ups's to write and let us know which ones work for them.

Benzion Chanowitz and Josh Lobel

UNIX Do's and Don'ts

Some Words of Caution

Recently we have heard from some readers who are nervous about experimenting with the suggestions that are contained in *The UNIX Directory*. There seems to be a deeply held fear of fouling up your system by issuing some cryptic command. So we thought we'd preface this month's UNIX Directory with a note about who we think our audience is and some UNIX Do's and Don'ts.

UNIX is the software engine that runs the Fortune. It is pretty much invisible to users because of the power of the Global Menu. However, the Global Menu has its limitations. Have you ever wanted to print out a directory of all of the files on a floppy? Would it be helpful to get a listing of all of the files in a directory sorted by date or size, so you know what to delete in order to make room on your hard disk? Would you like your ITE program to connect to a certain port without going through several steps and even dial a phone number automatically? All of these things are relatively easy to accomplish. But in order to do them, you need to learn a little bit about UNIX. We try to explain how to do these things as carefully and completely as possible -- assuming that you don't know anything about using UNIX. So fundamentally we target our column at novices. Hopefully, we will sometimes have a clever idea that is of use to more experienced users as well.

"Ah yes", you say, "but what happens when I erase my entire hard disk?". Good question -- of course you've been doing regular backups. The real answer to the question is that it is not all that easy to do serious damage. The primary two ways you can wreak havoc are either by erasing important files or by writing over them accidentally. If you are not logged in as root or manager, then the only files you can actually damage are your own (or others that have been set with permission for you to write over). To make use of UNIX, to do shell programming, to read directories, etc., you do not need to be logged on as a "super user", and so the risk you take is limited. The times when you do need to be logged on as root or manager are when you are altering a system file, such as the passwd file, or are copying programs into a system directory, such as /bin. Many times you can experiment with a program in your own directory, and once you are sure it is working properly, sign in as a superuser and copy the program into /bin.

Here are some steps to take in order to avoid any problems:

1. Never log in as root or manager unless you actually need the superuser status. There is no need to tempt fate.

2. Whenever you use the **rm** command (remove files), look at the command 2 or 3 times before you actually press RETURN. Once files are removed, they're gone for good.

3. Be especially careful when using meta, or wildcard characters such as the *. If you type **rm *** or **rm ?*** you had better be very certain that this is what you actually want to do. It's probably best to be as specific as you can about removing files. It's safer to type **rm /u/newsletter/*** than **rm ***.

4. Whenever you are going to modify a system file in any way, make a copy of it first. This could be onto a floppy or into another file with a new name. Many programmers would use a line like **cp /etc/passwd /etc/passwd.real** to copy the passwd file before changing it. Then if you have any problem, you can always copy the real passwd file back (**cp /etc/passwd.real /etc/passwd** restores the original copy)

5. Know when to stop. One of the best ways to learn is to try new things, make mistakes, and then correct them. This is certainly true of computers. It is important to find the right balance between stretching to your limits and stretching them so far that they break. If you think something you are about to attempt might cause a major problem, it might be wise to get more information first. **/u/fortune news** could help in that regard, or you may have some experts nearer at hand. But don't be afraid to experiment. Be brave, but don't be foolish.

6. If you do get into a bind, call before you dig yourself much deeper. Most problems can be remedied.

7. Don't work when you've only had 2 hours sleep.

Sooner or later, if you're working with UNIX or the Global Menu or the Basic Applications, something will happen on the computer that you didn't intend to do. If you use Multiplan, you've probably called in a new spreadsheet without saving the old one. If you use Fortune:Word, maybe you hit the RETURN key a couple of times when you were deleting something and suddenly 2 paragraphs disappeared instead of 2 lines. These things will happen, and often when they do there is an accompanying feeling of incredible stupidity. But the advantages to be gained with new knowledge will outweigh the difficulties you may encounter as a result of experimentation.

Good luck.

Josh Lobel

The UNIX Directory

Electronic Reminder

In last month's **UNIX Directory** we discussed the commands **at** and **cron** which are used for automatically executing commands at predetermined times. As was noted, this can be useful for running jobs on a regular basis, performing large jobs at night when no one is around, etc. One very simple and functional application is an electronic reminder system. By using **at** and **cron** and a simple shell script, the computer can easily alert you that it's time to feed the meter, or go to a meeting, or call your mother on her birthday, etc. Reminders can be scheduled years in advance, if you so desire.

There are many ways of doing this. We opted to go with the very simple approach. All our shell script does is 1) ask you when you would like your reminder; 2) ask you what message you would like to get and 3) gives that information to **at** and tells the computer to send that message out to your terminal at the desired time. It also beeps you to alert you of the message. We find this approach elegant in its simplicity -- there are some drawbacks to it, however. If you are not logged in at the time the message is sent, it will appear on your terminal, but if it is a satellite terminal, it will quickly be erased by the login message. Worse yet, your terminal might not be turned on, or you might be working at a different terminal, and in either case miss the message. The program could be altered to send you electronic mail, or send the message to a terminal you specify, or to all terminals, or whatever to fix these problems. In practice, since we tend to be logged on almost all day long, it works fine for us.

A couple of further notes before getting to the program. When this program runs, it will write your message on your

Continued on next page

screen, regardless of what you are doing at the time. This may be disconcerting, especially if you think your work will be ruined.

When something is written on your screen like this, it does *not* affect what you are doing. There is no reason to be concerned -- only what *you* type on your keyboard goes into your file. It's just the same as when someone sends you a message with **write** or **wall** (two functions also available from the Global Menu). All you need to do is rewrite the screen and the message will disappear and your ungarbled text will reappear. If you are in Fortune:Word, all you need do is hit **CTRL-W** (Hold down CTRL key and hit letter W simultaneously). In Multiplan, it might be a good time for you to save your work. This will erase your screen while you issue the commands. When the regular screen comes back, it should be fine. Basically any command you can issue which will require the screen to be redrawn will get rid of the message.

Lastly, a note on **cron** and **at**. New versions of these programs are scheduled to be included with the next release of the Development Utilities Package, along with **awk**. The versions we are distributing are early ones and may have some bugs. We have been using them for several months without any problems, however. If you do get the new Development Utilities package, please be sure not to erase the new versions and replace them with our older ones!

```
#     This shell script will allow you to enter reminder messages into your system and have them sent to you at
#     predefined times.  In order for it to work, you must have at and cron installed on your system.
```

```
clear
echo "This command is used to enter a reminder message onto your
screen"
echo
prompt  "Please enter time/date you would like reminder: "
read time
```

Clear clears your display.
(This line can be all on one line)

The prompt command is like an echo -n (no return) but actually executes faster. The time can be entered with all of the flexibility of **at**, e.g. 4:15pm Thursday.

read time takes what you type in and assigns it to the variable $time

---

```
echo
echo "Please enter your reminder message - one line only"
read message
```

Next you are prompted for your message, this time using echo so cursor drops to next line. As soon as you hit the RETURN key, the variable $message is assigned -- that's why it can only be one line.

```
echo `echo -n '' "'$message'" > '`tty`'; /bin/beep >'`tty` | at $time
echo
```

This is the line that does the work. It is very important to include the single, double and back quotes exactly as they are here. They are so elaborate because you may want to include an apostrophe in your message. The command **tty** reports what terminal you are logged in on. By enclosing it with back apostrophes, we use its output (e.g. the terminal #) in our command line. By using the semicolon, we incorporate two command lines in one. **beep** is another shell script that simply beeps a terminal. It is given below.

```
echo "The following message:"
echo $message
echo
echo "will be sent to you at " $time
echo "Press RETURN to get back to the Global Menu"
read x
```

This just echoes back to you the information you have just entered. The final read x allows a pause before going back to the Global Menu. It can be deleted if you use **rem** from the shell.

```
THIS IS THE BEEP COMMAND WHICH SHOULD BE INSTALLED IN /bin

echo -n ^G
echo -n ^G
echo -n ^G
echo -n ^G
echo -n ^G
```

This command is very simple. Basically it echoes CTRL-G's to your terminal, resulting in 5 beeps. (The ^G is a CTRL-G.) Since **echo -n** does not issue any RETURN's, the display will not be affected by beeps.

More About Free Software

We currently have three disks of public domain software. In our last issue we described the contents on the Fortune Utilities Disk. This time we will outline the contents of the other two disks: The Fortune:Word "Tutorial" and D.C. Grab Bag. We welcome contributions from our readers of shell scripts and public domain programs to add to our library.

The second diskette is called the **Fortune:Word Tutorial**. This disk is also from Fortune Systems, and contains a basic demonstration script of about 30 pages for Fortune:Word and the Extended Fortune:Word modules. The disk also contains numerous files that contain the examples that are used in the script. In a concise, and relatively brief document, it is possible to read through and try out most of the features of the Fortune:Word family of programs. To do so, print out the file called demo-packb, and then just start reading.

The third diskette is called the **D.C. Grab Bag** in honor of the Washington D.C. users' group that provided many of the original programs. We have added programs of our own as well as several that our readers have submitted. Here's a quick rundown of this one:

sctutorial

This is a Fortune:Word document that describes the ins and outs of the sc or screen editor mentioned above.

sc and screen

One version is like the program on the Fortune Utilities disk. The other version has a fixed right margin

ksc

This is a filter that can be used with **screen** to enable the use of the numeric key pad. (It may work as a filter for other programs as well.)

FTfix

Do you know those times when your screen seems to suddenly know Greek? This program will resurrect your screen.

Fortune:Word to ASCII

There are several programs for converting from Fortune:Word to ASCII and back. This is useful for doing shell scripts or even better for sending electronic mail. It can also be used to convert Multiplan documents to Fortune:Word documents if you use the *Print to File* option in Multiplan.

Okidata Printcap

The complete printcap entry for the Okidata 84 printer is here. It works with Fortune:Word.

Floppy Backup

Several different programs which you can use to backup your hard disk. One is an incremental backup, copying only the files that have been changed in the last x amount of time. The other is an archiver that copies all files that *haven't* been accessed for over x days (e.g. 30) onto floppies.

kermit

This program is used for error-free file transfer between 2 Fortunes, or between a Fortune and many other kinds of computers. We have used it flawlessly with VAX's, IBM PC's, and other DEC equipment. You need a version on your machine and on the other computer. Carlton Haywood of the D.C. Users Group recently created kmenu, a program that makes using kermit a cinch. Source code for kermit is also on this disk.

clock

Displays the time in big numbers on your screen. Source code is there also.

shell scripts galore

Including ones presented in our newsletter, such as a program to add your own programs to the Global Menu

games

No free software is complete without games. Included here are backgammon, biorhythm, life, mastermind, othello and snake.

Our next disk, which we are still preparing, will have printcaps for Epson and Okidata printers as well as some C-Itoh printers. In the games world, it will have Sail--a multiplayer game, startrek, rogue and adventure. We will have an announcement as soon as this is ready.

To obtain copies of these floppies, send us a formatted floppy and $4 for each floppy that you want -- if you would like all three that's $12. We'll copy the programs on and return them to you. Please allow several weeks for your floppies to return to you.

For Sale/Swap

This month there aren't any systems for sale, but there is some software available. Bernie Asner in Dallas has a limited supply of the following software: Business Basic, Order Processing, Accounts Receivable, Purchase Orders, Accounts Payable, Payroll, Fixed Assets, General Ledger, IDOL, Multiplan, Multi-User Upgrade and FOR:PRO 1.7 Documentation. He will sell these at reduced rates, but would prefer to trade for Fortune equipment, especially memory boards. Bernie can be reached at 214 258-1383.

A Hint for Fortune:Word Users

When making glossaries or exception dictionaries which will be shared by all of your users, you may find it cumbersome to type in the full pathname of the dictionary/glossary -- e.g. /u/frank/gloss1. There are two ways you can save a few keystrokes. The first is to have the system manager put the dictionary/glossary in the "root" or / directory. Then when anyone wants access to it, all they have to do is enter /gloss1. In order to do this, make sure that all files with the base gloss1 are copied, e.g. gloss1.dc, gloss1.fr and gloss1.gl. Also the permissions must be set so that everyone can access the files. This can be done by the manager through the Global Menu or by typing **chmod 777 gloss1* RETURN** from the UNIX shell.

Another way around the same problem is to make linked copies of the files in all of the /u directories. With a linked file, there is only one copy of the file on the disk, but there are pointers to that file in several places. When anyone changes the file, it will be changed for everyone. To make linked copies, you use the **-l** (that's ell) option to cp. To copy /u/frank/gloss1* to /u/joe type the following command: **cp -l /u/frank/gloss1* /u/joe RETURN**. This can be repeated for each user you would like to include. Before copying the file, use the **chmod** command discussed above to change the permissions on the file.

Multiplan, Cont'd from page 1

Each chapter also provides an illustration of the application at hand and a section called "The Model," which provides the formulae for calculations and explanation of "what goes where and why."

Once you have designed your new piece of software, the authors provide you with a "user's guide" of sorts. Each chapter contains a section called "Using the Model," to get you started with your new application. Finally, a "modifications" section tells you how to bend, shape, and fit the depicted model to your own idiosyncratic needs.

Clearly, the strength of *MULTIPLAN Models for Business* is the symmetry and predictability with which each model is explained. An introductory chapter provides an overview of the MULTIPLAN spreadsheet program. It's not a tutorial, but it would probably be enough to bring an experienced VISICALC or Lotus 1-2-3 user up to speed. One disappointment is the Index, which lists only MULTIPLAN functions and commands. Most likely, readers will be searching for sections on various business applications rather than for an example of a given function.

All in all, we believe that *MULTIPLAN Models for Business* would be a useful addition to the library of any MULTIPLAN user--especially those with the best of intentions and a lack of time.

Here is a listing of the models contained in the book on a chapter by chapter basis:

Cash Management
.....Balancing the checkbook
.....Tracking cashflow
.....Managing cashflow
.....Projecting cashflow

Debt Management
.....Amortizing a loan
.....Prepaying a loan
.....Tracking a line of credit

Fixed Asset Management
.....Calculating ACRS depreciation

Working Capital Management
.....Tracking Accounts Receivable collections
.....Calculating economic order quantity
.....
Financial Statements
.....Producing a comprehensive financial statement
.....Performing ratio analysis
.....Using interactive financial statements

Planning and Budgeting
.....Perfoming statistical analysis
.....Calculating growth capacity
.....Managing cues (2 models)
.....Budgeting for a new venture
.....Determining price-volume relationships

Quote Preparation
.....Preparing quotations

.....**Mark Rhodes**

/U/HELP

This month some of our readers have supplied the help.

Basic and Expansion Cabinets

Charles Fosha in Colorado Springs who works extensively with BAS/IDOL and Fortune:Word glossaries wrote us with some important information.

I would like to pass along an experience I recently had while installing a 30MB expansion drive for a customer with a System 5. The customer wanted to put the business BASIC and some property management programs on the expansion drive. I moved BASIC and all the utilities to the same directory under /u1 thinking I knew how to change the IPL files to redirect BASIC (/u1 is the "root" of the expansion drive). I first added /u1 to the existing definitions for D0 and D1 in the diplt0 file. After four hours of frustration, I called FORTUNE and 15 minutes later and $28 poorer I was in business. I was informted that the directory names for BASIC had to be 8 characters or less. So /u1/b/BWORK became /u1/b/BW and /u1/b/BDATA became /u1/b/BD.

Other readers have written with the same problem, so that information should be very helpful. As an aside, we will be publishing an article on strategies for optimizing performance with expansion cabinets in the very near future.

Modifying the /etc/passwd file

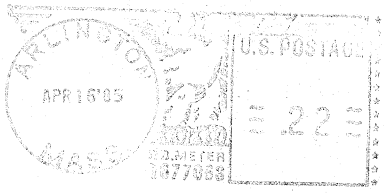
David Hinze in Shelby Michigan wrote with a comment on the **Unix Directory** on the passwd file:

Your article on modifying the passwd file was interesting but it is much easier to log on as manager, go to option S2, System Management and using the "modify existing account" option to merely change the shell script. You can use "wp2" for Fortune:Word, "master" for Multiplan or "BASIC" for the Business Systems. A handy trick for going between the Business Systems and Multiplan is to type "SHELL" at the bottom of any Business Screen when prompted with the "ENTER SELECTION OR END" prompt. This puts you in unix after displaying the message "Invoking unix as a Sub Process". You can then type "master" to enter Multiplan. Once there it will be necessary to change the library to your own as you will be in a Multiplan libary of /b, Another alternative is to change to your directory in unix before invoking Multiplan by typing "cd /u/dave RETURN" and then the command "master". When you finish with Multiplan the CANCEL/DEL key will return you to unix, and a CTRL-D (hold down the CTRL key and then press letter d) will return you to the exact spot in BASIC that you left off. To go to Fortune:Word, follow the same steps, and just substitute "wp2" for "master".

If any of your readers are interested, we have made many small additions and changes to the SMC Business Systems and IDOL programs such as modifying the Accounts Receivable label generating program to print out Rolodex cards complete with telephone numbers, addressing directly onto continous envelopes, etc. We would be happy to share these items with your subscribers if you feel the readers would be interested.

Once again the Global Menu shows some of its power. If you are interested in Mr. Hinze's programs, please mail your requests to **/u/fortune** news and we will forward them to him.

/u/fortune *news*
20A Prescott Street
Suite 28
Cambridge, MA 02138



/u/fortune* *news. . .*

Newsletter for Users of the Fortune 32:16 Computer **Volume 2 Number Two**

Important News about Fortune:Word

As many of you probably know, Fortune:Word 2.0 was released this spring. This is a revision to the Extended Fortune:Word package and incorporates several improvements. Users will find the following changes:

1) the input speed is much faster, making it very difficult to type ahead of the computer,

2) the hyphenation and pagination routine is much more flexible, making it possible to separate out the two functions, and run them manually or automatically,

3) glossary entries run 2-4 times faster than they did before, and finally,

4) most of the bugs you may have encountered in the early release.

There are also several significant developments for users of the features of Extended Fortune:Word. They are:

5) the spelling checker has been greatly enhanced. You can now run it in interactive mode, or if you like, you can run it in the background while you go on to work on other documents. When a word is misspelled, 8 words are suggested as replacements. If the correct word is found it can be substituted with a single key stroke. The exception dictionary is continually updated, so that a word copied to the dictionary at the beginning of a document will no longer be cited as incorrect throughout the entire document.

6) The hyphenation and pagination routines will now work with multiple columns, and you have a choice of several different multi-column layouts.

New Documentation for Glossaries

In addition to the software upgrades, Fortune has assembled two new manuals that you may find of interest. The first is a much-needed guide to Advanced Glossary use which includes many helpful examples. The second is a quick-reference guide for Fortune:Word which could be helpful for inexperienced users.

Obtaining your 2.0 upgrade

As mentioned elsewhere, Fortune is discontinuing their subscription update service. They will honor contracts for those of you who have already subscribed, so you should receive the Release 2.0 in the mail. If you don't have a contract, the update can be obtained through your dealer. The price is approximately $100.

IMPORTANT: Special Upgrade Offer

News for Basic Fortune:Word Users

There's some good news and some bad news here. In the very near future, Fortune will stop selling the basic Fortune:Word package and instead will sell the Extended

See **Special Offer**, page 2

Featured in this Issue. . .

New Software Scheduled for Imminent Release
Fortune Does Windows!

The most exciting new piece of software from Fortune is due to be released within a month -- Fortune Windows. This package lets you divide your screen into several windows, and simultaneously run different applications in each one. You can have Fortune:Word on the screen, along side a Multiplan spreadsheet, with your database right below. Information from one window can easily be transferred to another. You can "zoom" in on one application so it fills the screen, and then zoom in on another. It sounds like a very exciting product.

The package will be bundled with upgrades to Multiplan, Fortune:Word and the operating system, which are necessary to let these packages work with the Windows software. The price of $695, includes these upgrades. We will have a more complete description of this package in our next issue, after we have had a chance to try it out. The upgrade levels are Multiplan 1.4.2, Fortune:Word 2.1.1 and ForPro 1.8. Basically the major feature of these upgrades is compatibility with Windows, but ForPro 1.8 also incorporates the consoleless system. This revision lets you assign the console functions to one of the regular RS-232 ports. Once you have done this, the console controller board can be removed from the system, making room for another Comm A or B board, or a Streaming Tape controller.

Late this fall, Multiplan 2.0 will be released. This is Fortune's complete rewrite of Multiplan which will be a considerable improvement over the existing version. Reportedly, recalculation is lightning fast. Spreadsheet size will be limited by your process size, probably making room for spreadsheets that are 4 to 8 times larger. External references will also be made much more efficient.

See **Windows**, page 7

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Editor Josh Lobel
Associate Editors Benzion Chanowitz, Mark Palmerino, Mark Rhodes
Contributor Emily Schulman

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/u/fortune *news*, 20a Prescott Street, Suite 28, Cambridge, MA 02138. Telephone 617 876-4763.

The text for this newsletter was prepared using the **vi** editor and **Fortune:Word** on a FORTUNE 32:16 computer. It was then transferred using Kermit to a PDP 11/44 computer running UNIX and prepared for typesetting with the **troff** program.

Special Offer,

Cont'd from page 1

package. This includes the Spelling Checker, Records Processing (a simple database for merging mailing lists, etc.), and the Advanced Features (including windows, multi-column, advanced glossary use, and table of contents and index generators). At the present time, Extended Fortune:Word sells for $1,495. Until July 31st, anyone who now has basic Fortune:Word can upgrade to the full package for $595. Presumably, after that time, you will not be able to upgrade -- you will have to buy the entire package. Basic Fortune:Word may be available from another source, but there won't be any further upgrades or support from Fortune. This change means that Fortune can support the same product for all of its users.

Of all of the extended features, the one that is quite likely to be of value to any Fortune:Word user is the spelling checker. In its new format it is very easy to use. Although it doesn't catch correctly spelled words that are out of place or homonyms, like there or their, it does quite well with 90% of the problems. If you do a lot of copying between documents you will appreciate the windows feature which lets you see both documents on the screen simultaneously. Another use for the window command is for notes or outlines -- thoughts that you want to refer back to while you write. With the windows command you can have the notes displayed while you are writing the text.

In situtations such as law offices, where there is a great deal of repeated typing and use of forms, the advanced glossaries may be useful. They can do things as basic as automatically underlining a word or sentence, or as complicated as creating an entire form which prompts the user to fill in the blanks. Advanced glossaries can also be used to perform simple math functions.

We have not used Records Processing extensively, although it does seem to be fairly effective and flexible for mailmerge applications, e.g. managing a simple database and merging it with letters, forms, or just printing labels. Some users have told us they also use it for tickler files, etc. and are quite pleased with it. For larger, more complicated databases, it is somewhat slow.

If you have an application that requires more than one column on the screen, the Fortune:Word multi-column feature is the most flexible we have seen.

In summary, if you are more than a casual Fortune:Word user, you will probably be able to make good use of at least some of the features of Extended Fortune:Word. *It is certainly worth getting a demonstration before the Upgrade Offer expires on July 31st.*

More About Uninterruptable Power Supplies

In our last issue we stated that there are two kinds of UPS's: *Continuous UPS's* which are constantly "on-line" and *Standby UPS's*, which switch on very quickly when there is a power fluctuation. Continuous UPS's have the advantage that they totally isolate the computer from the power line and don't let any fluctuations get to the computer. The Standby UPS's are more efficient because they are not always running, and therefore they create less noise and heat. They are also usually less expensive than the continuous type.

Several readers have let us know that there are some other alternatives that combine the best features of both types. There is a technology called "ferro-resonance" which is used in some new UPS's. In order to understand what it does, it is necessary to realize that normal AC line power delivers alternating current, which creates a continual sine wave. Most UPS's (and computers) are sensitive to a loss of part of that wave. In ferro-resonance, an inductive resonance is created which can sustain the AC power until the battery begins producing its own power. If power is lost, the UPS instantly cuts in, synchronizes with the old AC, and the computer never detects a problem. Thus there is no cross-over delay, but the UPS isn't constantly working. Heat and noise are reduced without sacrificing reliability.

In the chart included in Volume 2 Number 1, the only ferro-resonnant UPS that we know of was from Best Power. In addition, our readers have notified us of one other:

Superior Electric Company (203 582-9561) in Connecticut manufactures the Stabiline 500VA UPS. This UPS serves as a line conditioner and regulator as well as functioning as a backup power supply. It can sustain power for about 10 minutes at full load. It is priced at $1,175. It should work for either the Zenith or Western Electric power supplies. The Stabiline emits an audible hum that might be disturbing if you are sitting right next to it.

The second alternative is a unique system designed by SAB NIFE in Rhode Island. They are producing the Datapower UPS. SAB NIFE is the US subsidiary of a major Swedish battery firm. Their design uses a Pulse Width Modulation system to invert the DC power from the battery into AC. This is a very efficient system for creating AC. The AC coming in is passed through a conditioner and runs in parallel to the inverter output. This means that normally there is a very small load on the inverter, so little noise and heat are produced. If the AC input fluctuates, the inverter takes over completely and supplies conditioned and regulated power. This unit also offers isolation from lightning strikes. They have used the product with their own Fortune computers. It costs $1,150 and is rated at 800VA which should be adequate for most systems. The power factor is .8 and the unit can sustain itself under full load for 15-20 minutes. Larger and smaller versions are due out this fall. For further information on the Datapower line, please contact Dick Dow at Dow Information Services, 401 826-2222. SAB NIFE may be reached at 401 333-1170.

Thoughts from our Readers

A Fortune:Word/Multiplan Tip

Mark Fellman in Minneapolis has sent us this suggestion. If you have the Advanced Features module of Fortune:Word (or if you take advantage of the upgrade offer described in this issue), it is possible to issue a UNIX command from inside a Fortune:Word document. This is done by pressing the **Command** key (F13) and then hitting an exclamation point. Any UNIX command can follow the !. For instance, **! date** will provide the time. Mark enters Multiplan directly from Fortune:Word by typing **! mp68**. **mp68** is the UNIX command for Multiplan and it will take you directly into a spreadsheet. (**! master** will give you the Multiplan Menu). The nice thing about this maneuver is that when you leave Multiplan, you return to the document you were editing in Fortune:Word.

If the Multiplan directory you would like to be in is not the same one you are currently in for word processing, you can create a shell script that will change directories before executing Multiplan. It might look something like this:

```
cd /u/fred
mp68
```

This would put you in fred's directory before running Multiplan. If you called this shell script fredmp, then from Fortune:Word you would just type **! fredmp**.

Setting Up Expansion Cabinets

In our last issue, we pointed out that you may have some difficulty setting up an expansion cabinet with BASIC because the names of BASIC files are limited to 8 characters in length. One alternative is to fix your IPL files and filenames. David Kloes in Texas and Guy Washburn in Massachusetts suggested another alternative. If you copy all of your entire /b directory onto the expansion disk and then mount it as /b, you don't need to make any adjustments. When the system looks for /b/BWORK, it will find it on the expansion disk. The same can be done for the /u directory if you like. If you do that, you don't need to adjust the /etc/passwd file, and you'll have shorter pathnames to type. If you want to get fancy, you can format the expansion disk into several file systems and mount one as /u, one as /b, etc.

The UNIX Directory

Reconfiguring Without a Shutdown

As many of you know, all of the communications ports on the Fortune need to be properly configured for the computer to work. For terminals, all this usually means is that you need to specify the correct Baud rate. For printers, you need to specify the Baud rate and the printer type. If the Baud rate for terminals or printers is set incorrectly, either you will get garbage instead of text or you may get nothing at all. If a printer is set to the wrong type, you should get text, but it won't be properly formatted and there may be some garbage mixed in.

If you reconfigure a terminal port, you may have thought that it was necessary to shut down the system before your changes would take effect. It is true that the system needs to be "reset", but it is possible to do this with a simple shell

See **Reset**, page 4

A Database Overview

From talking with many Fortune users around the country, it is clear that most people primarily use their computers for word processing and Multiplanning along with some business applications. Given that for many people Fortune:Word was the impetus for buying the machine this isn't surprising. In the microcomputer/business world as a whole, word processing and spread sheets seem to be the easiest business activities to implement on computers. Although these are certainly very valuable ways to use computers, we predict that database applications will soon rival them in popularity.

Databases are used to order information. Information in a database can be stored, retrieved, sorted in any way, or printed out in a report. The information might consist of sales contacts, orchestral scores, court cases, airlines reservations, newsletter subscriptions, inventories, etc. Almost every business uses information that could be accessed and stored more efficiently with a good database system.

In the days of yore, programmers would struggle for long hours at great expense to create workable database systems. They might be written in Fortran or Cobol, Basic or C. In any case, the methods for creating these systems were not accessible to nonprofessionals. In the last several years, programs have been developed that make it easier to set up database systems.

Some of these programs are very easy to use -- some are even menu driven -- and can be successfully used for mailing lists, etc. **Unicorn/DB** from Guardian Systems, and to some extent **Fortune:Word Records Processing** are examples of this kind of program. They let the user create data entry screens and they provide ways to recall the stored information. They are particularly good for what we will call *one-dimensional* data. A mailing list is a perfect example: for each person the computer will store their name, street address, city, state and zip code.
Although there are several pieces to the story, they all fit together in a single package. Each name is associated with one address.

Let's suppose we wanted to get a little more complicated. We now want to store information about the topic of each letter that is sent to each person. We might want to find all the people who had received a fundraising letter so that we could send them a follow-up letter. The easiest way to do this is would be to add extra slots to each person's file for letter topic. However, suppose we wanted to sort the names by the topic of the letters they received. We would have a problem once we started sending out many letters about different topics. This would mean creating several topic slots. Would we sort by the topic in the first letter slot or the one in the second? The program couldn't easily decide and so we probably could not get our desired results.

One solution would be to enter a whole new entry for each letter. We would need to retype the name, address etc. just to enter the new topic. That would work because now there would only be one topic per name, but it would be very cumbersome and inefficient. The more desirable solution is to use a database program that can deal with **multi-dimensional** information.

With a program like this, you associate each topic entry with a name entry. For every topic entry, there is only one name connected to it, but any name can have several topics associated with it.

Name Entry	**Topic Entries**
Harry Cranston	Fundraising Letter, March
73 Mountain Road	Thank you for $20 donation
Silver Hills, Vermont	Announcement, Pot Luck Dinner
	Award presented, Best muffins

With the information stored like this, you could easily sort all of the letters by topic. Since each topic is paired to a name entry, you could look at the full name and address for the letters sorted in this manner and create a new list of just the people who had already received a Fundraising letter.

This kind of database is called a relational database, because it can store related lists of information in a single file of data. There are several relational database programs that are available for the Fortune including Informix, Rubix, Sequitor, Unify, Progress, etc. In the next issue, we will discuss Progress.

Reset,

Cont'd from page 3

script. If you have the Fortune Utilities disk, you will find a program called **RESET** which will accomplish this. The shell script is actually very brief. It is as follows:

```
/m/sysman/dtinit -M
kill -2 1
echo "RESET COMPLETE"
prompt "Press RETURN to continue"
read answer
```

We suggest that you put this into a file called **RESET** in /bin. Make sure to use uppercase characters, because there is a UNIX function in the Development Utilities Package called **reset**.

To use this program, first reconfigure the ports, then run **RESET**. It may also be necessary to kill the old login process for the terminal that is being reset. To do that, type **ps RETURN**. You will see a list of the processes. Look in the column headed TTY for the terminal you are changing. When you find it, look in the same row under the column PID for a number. In the far right column you will see a letter which indicates the current Baud rate, e.g. n = 19,200, m = 9,600, etc. Let's suppose the number in the PID column is 163. In order to kill that process, type **kill -9 163 RETURN**. Now if you type **ps RETURN** you should see a new Baud/letter displayed.

If you reconfigure a printer port, it is *not* necessary to do any of this. Once you reconfigure it, the change is made. There is no need to shutdown or **RESET**.

Keyboard Delays Fortune Intelligent Workstation

First a correction on terminology -- the ASCII terminals that Fortune has been selling for the last several years are actually called FIS 1000 terminals. The new terminals are called Fortune Intelligent Workstations.

The Fortune Intelligent Basic Workstation, which includes a display and keyboard, has been delayed because of problems with the keyboard. Fortune had been subcontracting with an outside firm to produce the new low-profile, IBM-compatible keyboard, but they recently decided to take control and bring the production in-house. They have purchased the design, manufacturing rights and inventory for the keyboard from the vendor. This action has had two consequences: 1) The new keyboards will not be ready until September and 2) The cost of the new basic terminal has gone from $795 to $995. In part, this price increase is probably due to a stopgap measure that Fortune has taken. Until the new keyboards are ready, Fortune has taken their existing keyboard and modified it to work with the new terminal. The modified keyboard is not IBM compatible. It is also significantly more expensive to manufacture than the planned keyboard. We hope that when the new keyboards are released in the Fall, the price of the workstation will be readjusted. In the meantime, if you purchase your terminal now and you want the new keyboard later, you will have to buy it separately.

The current pricing for old and new terminals is as follows:

$1,195	FIS-1000 Workstation, includes RS-232 cable
$995	Fortune 1000 Basic Workstation, does not include RS-232 cable
$40	RS-232 cable

The new terminal offers a larger, 14-inch screen, which is available in green or amber. It also offers several soft-setup modes to control baud rate, screen scrolling etc. In an earlier issue, we reported that it would also support 132 column screen display. At this time, that feature is not part of the basic terminal. Rather, it will be included in a VT-100 emulation package that includes a hardware upgrade. We think this is a marketing mistake. Of all of the new features of the new terminal, 80/132 column display is one that really sets it functionally apart from the old terminal -- it lets the user do things that are completely different, such as view very wide spreadsheets. It seems that it would also be incredibly useful for the new Windows software which will be released in a month. If it is not too late, we encourage Fortune to include 132 column capability with the basic package. **If you agree with this position, write to Rich Seigel, Vice President of Marketing at Fortune Systems. Decisions like these are driven by market demand, so we should let them know our feelings. Write soon, before the design decisions have progressed too far.**

The other building blocks of the new workstation are scheduled to be released shortly. The plans are to include the following:

July	System Unit (8088 processor with floppy drives, runs MS-DOS software
July	Monochrome Graphics Card
Fall	UNIX/ForPro card (run ForPro locally on system unit)

/u/help

System Stolen in Chicago

Mr. Harry Tressel has notified us that his Fortune computer system was stolen recently. The system can be identified as follows:

	CPU	CRT	KB
serial #	2426	CT1147A	KB1294
ident #	1000044-08	1000019-01	1000016-01

The system, which was converted from a 10 meg to 20 meg disk, has 768K of memory. Along with the usual software, it also has Fortran-77 installed. An IDS 132 printer (Serial #019321) was also stolen. The internal serial number and group number of the CPU are 654-FRS-880 and 802-DJF-651 respectively. These numbers can be accessed on the system by typing the UNIX command **mid**. They would identify the system in case the exterior serial numbers were erased or obliterated. If you have any information about this system, you can reach Mr. Tressel at: Harry S. Tressel and Associates, 2785 Shannon Road, Northbrook, IL 60062, (312) 564-5508, or contact the Chicago Police (RD No. G-197581)

Note: As you may infer from the above, every Fortune CPU possesses a unique internal serial number and a more general group number. These may be accessed by typing the **mid** UNIX command. You may wish to jot these numbers down. In that way, we can all make life more difficult for potential thieves.

CORRECTION

(editor's note: In our columns about free software, we mistakenly identified screen as being in the public domain. It is not, although the version we have is still available on our disks. Bell Technologies has asked us to print this correction and clarification. We apologize to them for the misunderstanding.)

Earlier issues of /u/fortune inaccurately referred to the screen editing program commonly known as "screen" as being in the public domain. In fact, this program and the similar programs knows as "sc", "sced", and "hexed" are the property of Bell Technologies of Fremont, California. "The Bell Screen Editor" is the correct, trademarked name of the program.

Bell has licensed Fortune Systems to distribute the Bell Screen Editor on Fortune equipment only, in binary form only. The Bell license to Fortune allows Fortune to distribute only the old, downrev 2.0 version of the Bell Screen Editor. As Fortune's agent, we have been distributing this downrev version. If you received this program from us (either on the D.C. Grab Bag or Fortune Utilities diskettes) you should mark any media containing it "COPYRIGHT 1981-84 by Dimitri Rotow". If you do so, you may continue using it.

Please note that none of the modern releases of The Bell Screen Editor are licensed to Fortune or to us. The current release, version 4.3, is available from Bell Technologies, Post Office Box 8323, Fremont, California for $245, on Fortune 32:16's, and $195 on MS-DOS machines. The current release incorporates word-wrap, ability to run with termcap, and a substantial number of enhancements over the old release. Contact Bell Technologies for details.

News about Fortune

There is quite a lot of news from Fortune Systems these days. In fact, there have been so many developments recently that some of what we have to report may already be out of date. It all started last March with the Fortune Worldwide Software Vendor's Conference in California. . .

REDWOOD CITY, March 14. Fortune Systems Corp hosts a convention of software vendors and dealers from around the world. In evidence at the cocktail party reception are numerous Fortune employees (including many members of the top management), dealers and software vendors. Most of the vendors are located in the U.S., but several are from other parts of the world. There were large and small dealers. In all, there were probably 200 organizations in attendance.

The next morning, Jim Campbell delivered the opening remarks at the meeting.
He gave a summary of where Fortune had been and where it was going, particularly in terms of marketing and fiscal condition. As has been mentioned in the past in these pages, Fortune is moving away from the computer retailer as an outlet for their equipment. They are now concentrating in four main areas: OEM's; Vertical Markets; Value Added Retailers; and Large Corporate purchases.

OEM's (original equipment manufacturers -- i.e. a company like Bunker Ramo selling Fortune Computers under their own name) had been largely ignored in doing this. If Fortune can sign an agreement with a large one, it will obviously give their product much more credibility.

Vertical markets such as the legal and medical professions are being targeted for marketing efforts. There is already software available in these fields and more is being developed. Fortune will place advertisements specifically in these markets and develop the expertise needed in the dealer community for these fields. In general, they plan to have a more aggressive marketing campaign, although it seems it has yet to really materialize.

Value Added Resellers (VAR's) are also being given attention as is Fortune's independent software organization. VAR's bundle software with hardware and sell computer solutions businesses. The software that is currently available is cataloged elsewhere in this newsletter.

(editor's note: Since this meeting, Fortune has restructured its dealer network by creating a new Master Dealer Program. This is essentially a distribution network, with 10 "master dealers" located around the country. They feel that this program will provide greater support and marketing savvy to the local dealers. It will also lessen the burden of support for Fortune because the local dealers will now deal directly with the Master Dealers for their support.)

The last sales arena is the large corporate setting. Fortune is now concentrating primarily on the communications and automotive industries. The largest corporate users are now Bell South (one of the 7 AT&T public utility companies spun off from AT&T) and Ford Motor. They each have over 500 machines. Fortune is eager to secure contracts with other phone and car companies. It will be interesting to see how these develop as AT&T becomes more involved in the marketing of UNIX micros. Thus far, it has been a tribute to Fortune that they have been so successful in these environments.

Campbell reviewed Fortune's financial situation. The large amount of cash that was produced by their original stock offering has dwindled. At the end of 1984, they took some large write offs for excess and obsolete inventory, legal expenses, and accounts receivable. This produced a substantial loss. Much of this loss is more apparent than real. Their actual operational loss, was only $2 million. The advantage of these writeoffs was that they could begin 1985 with a clean slate. Their two primary objectives for 1985 are to preserve the remaining cash and to become profitable. They intend to do this by producing 25% more revenue for the year, which would come to approximately $85 million. They also are trying to streamline the organization in order to to lower the breakeven point. In 1983, the quarterly breakeven point was $34 million. In March, it was $17 million.

(editor's note: In the last month, Fortune has undergone another reorganization resulting in approximately 100 people being laid off. They are also consolidating their operation into one physical plant. Presumably these actions will lower the breakeven point even more.)

Their current cash ratio in March was 6:1. Their inventory was down to $20 million for the first time -- at the start of 1984 it was $27 million. At the beginning of 1984 they were at 1.5 turns, by the end they were at 3.5 turns, and their goal for the close of '85 is to be at 6 turns. For those of you who are familiar with financial analysis, those are all healthy signs.

Several other members of Fortune's top management team reported on their areas of expertise. Bill Bench, the V.P. of Corporate Accounts, described the history of their relationship with Ford and Bell South. Ford went from 10 systems in 1983 to 750 systems in 1984. The Fortune office in Michigan went from 2 to 22 employees with 14 classrooms at their disposal. Ford uses Fortune:Word and Multiplan heavily, as well as many of their own custom-designed applications. Bell South has over 800 systems. They have bought Fortunes because they offer a robust UNIX system with solid office software. (Pretty much the same reason the rest of did.) They also use the communications capabilities of UNIX extensively, and have established many user networks throughout the 10 states in which they operate.

Fortune has some preliminary agreements with General Motors -- their seed machines have been well-accepted and management is optimistic. GM presents a huge potential market, if it can be cracked.

The airlines are another targeted industry. A Request for Proposals was placed by a major airline and 50 vendors responded. The field was cut to 8.
IBM and Convergent Technologies were among those eliminated. Fortune was included in the top 8 finalists. Unfortunately, they were not among the top 4 chosen, but they were pleased with their overall success. The needed software was not really ready at that time, but they are continuing to court the airlines.

Overall, Fortune projects $50 million in income from corporate accounts in 1985.

The other report that was very interesting concerned manufacturing. Jim Firenz, the Vice President of Manufacturing, outlined Fortune's progress. Through the introduction of new testing equipment and procedures, they have greatly reduced their failure rate. In early 1984, 60% of the component boards didn't function properly. In March, that number was reduced to 10%. By the same token, a year ago 60% of the completed units failed the final inspection. In March, that figure was down to 2%. This was accomplished by catching and correcting problems early in the cycle. Packaging was tested for vibration and shock and it was improved

Continued on next page

News about Fortune, Cont'd

to correct for earlier defects. Through improved efficiency, Fortune's manufacturing capacity increased by 60% while there was a 40% decrease in personnel.

The rest of the week was spent in workshops and seminars whose topics ranged from how to provide good support, to software demonstrations, to technical discussions of graphics and performance enhancements. We will have an article about ways to enhance system performance in a future issue.

The conference was effective in presenting a positive image of Fortune Systems. It is clear that they have learned from many of their mistakes and are now trying to turn things around. In the months since the conference, it has been made apparent that this will continue to be a struggle. The micro computer industry is suffering from cutbacks at many of the major companies. Demand is down. Hopefully Fortune will be able to maintain their position and begin to move forward. The many professionals we speak with tell us that the Fortune product is still among the very best, even with the introduction of other UNIX micros from other vendors. Fortune has had their product out for over two years, and many of the bugs that plague other machines have already been worked out. It is fairly fast, and new revisions of their software continue to enhance performance. It is also solid. Most system problems can be repaired with out major loss of information.

Thoughts from Jean Yates

As mentioned in the **News about Fortune** column, Jean Yates was the featured speaker at the Fortune Worldwide Software Exposition in March. Ms. Yates is the publisher of *The Yates Perspective* and a well-known authority in the UNIX world. What follows are some predictions and highlights of her speech.

Fortune Systems can be to UNIX what Compaq is to MS-DOS. Obviously Fortune is not as large as IBM or AT&T, and will never be. However, Fortune could be the next in line in the world of UNIX micros. Their hardware and software are solid and available today, which is still more than can be said about much of the competition, including some of the larger corporations.

In vertical markets (programs tailored explicitly for a specific profession or application, e.g. medical practitioners, law offices, manufacturing, etc.) UNIX will become the dominant operating system. The main competition in these markets is from the IBM System 36 and from some Prime and Data General products, some of which use other operating systems. Wang is not well positioned in this area because their independent software development program is very undeveloped. UNIX offers the flexibility and the multiuser environment that are essential for these applications.

To underline the promising future of UNIX, she asked the audience to guess which community is the largest user of UNIX computers. Industry, Education, Science -- the answer is Government. The Navy has put out a bid for 15,000 units. The IRS is also very interested in UNIX machines. These agencies will be a major driving force in the demand for UNIX computers. Most of them require the System V version of UNIX, the version currently being pushed by AT&T. (Fortune currently uses a combination of Version VII and System III, but is in the process of becoming compatible with System V).

Speaking of AT&T, Ms. Yates feels that they will become a major force in the sales of small computers and software, and consequently so will UNIX. She based this on two major ideas -- one a fact and one a prediction

Many people feel that the recently unleashed AT&T can't compete with other companies that have been in the retail market for much longer. They say that AT&T is doesn't know how to sell. Well Jean Yates says that AT&T has 36 billion dollars in assets *and* that they are the only company that bills almost every household and company in the country every month *and* that they have very few receivables over 45 days old because they can cut off our phone service. Those resources give AT&T the power to make mistakes and dabble some before they hit on a big seller.

The second idea -- the prediction -- is that one of the key elements in the future of computing will be networking or communications. Buildings will be wired so that both voice and data communications will be passed over the same wires, in order to greatly reduce wiring costs and produce simpler more efficient systems. Transmission speed will be enhanced. Common switching equipment will handle voice and data. Information sharing between computers will combine the advantages of microcomputers with the advantages of mainframes. Who is the leader in the field of communications? And what is the leading operating system for communications? AT&T and UNIX. Communication between varying IBM's is very complicated, and in many cases impossible. Their efforts to establish standards are confused. Not so with UNIX. It is easy to attach all different kinds of UNIX machines together. Which brings the story back to Fortune.

AT&T will create the demand and has the clout to set standards. Once they do, there will be many holes that need to be filled in. The Fortune 32:16 family is in an excellent position to fill those holes.

Windows, Cont'd from page 1

Late in the fourth quarter, Fortune:Word 3.0 will be released. This version will support footnotes and forms completion. It will also be terminal independent -- meaning it will work with a great variety of terminals. Note that 3.0 is a revision for Extended Fortune:Word only. There won't be any further revisions of basic Fortune:Word. (See article elsewhere in this issue)

Graphwriter, from Graphic Communications, Inc. of Waltham, Massachusetts, is now a Fortune Five Star product. Graphwriter is used to create presentation quality graphs on a variety of printers and plotters. With the basic package, over 10 different kinds of graphs can be created -- with the extended package, the number grows to over 20. Among those included are bar charts, pie charts, organizational charts, and Gantt charts. Combinations of these styles are also possible. In order to use Graphwriter, you need a supported printer or plotter. Because the program is designed for hardcopy output, a graphics terminal is not necessary. If you have a graphics terminal, it is possible to display a chart on the screen before printing it. At the moment, the only software package that Graphwriter can read data from is Multiplan.

Console Graphics Card Available

The long-awaited console graphics card has been released. This card replaces the console video controller currently in your system and has the ability to display 500x800 pixels on your console. The board does not affect the operation or functionality of any other terminals on the system. The price is $1,995.

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2/2

Newsletter for Users of the Fortune 32:16 Computer **Volume 2 Number Three**

Fortune Software Index

For those of you who thought there wasn't enough software available for the Fortune computer, here's an article which may boost your spirits. In this issue we are including an index of software available for the Fortune 32:16 computer. This index is a summary of the information contained in a catalog published by Fortune Systems called the **Fortune Systems All Star Software Catalog**. This catalog includes software written by Fortune Systems, as well as by Independent Software Vendors (ISV). All of the listings have been categorized by Fortune with a star system, which works as follows: **Blue Star** software is developed, distributed and supported by the ISV. Vendors of Blue Star products have supplied at least one positive user reference and completed a technical questionnaire. **Gold Star** software is also developed, distributed and supported by the ISV. These products have had at least four positive references, one of which is outside of the ISV's geographic area. **Five Star** software is developed and supported by an ISV, but is distributed directly by Fortune. Presumably these products have met the most stringent standards, although it should be clear that the star system is not necessarily based on review, but rather whether or not the ISV has met the specified requirements. **Super Star** software is distributed, supported, and typically developed by Fortune Systems Corp.

We suggest that before buying your software you find someone who can help you with support (preferably local) and that you talk to some other users who have the package. The vendors may be able to provide you with a reference. As we compile the results of our recent survey, we may also be able to pass along users' impressions or provide a reference.

The **All Star Software Catalog** is divided into sections which parallel the Global Menu grid, e.g. **Office Automation, System Tools, Communications**, etc. We have followed these categories in our index. Because of space limitations, we are including the **Office Automation** products in this issue, and will publish the remaining products in our next issue. The software included in this issue is primarily what we would call

See **Software Index**, page 5

News From/About Fortune

There's not too much room for news this month, but we thought you might like to know that the **New York Times** reported on July 24th that **Fortune Systems Corporation** announced a profit of $222,000 for the 2nd quarter of 1985, based on revenues of $14,628,000 This is a 49% increase in revenue over the 1st quarter of this year.

They've also announced a product called **FOR:FROG** which will be released with the 1.8 upgrade of **For:Pro**. Don't confuse FOR:FROG with kermit -- they're not related. FOR:FROG is a disk reorganization/optimization program — the first of its kind for UNIX micros. Fortune predicts 10% speed improvement with 1.8 and noticeable improvement from FOR:FROG. More on these when we get more information.

See **News About Fortune**, page 8

Featured in this Issue. . .

Progress -- A Powerful Database Tool and Applications Generator

(editor's note: Progress is a Five-Star product available from your Fortune Dealer. It is produced by the Data Language Corporation in Billerica, Massachusetts. Current pricing is $2,450 for Fortune computers (350 for Run-time, 700 for Query/Run-time). We have been using Progress to do our internal record-keeping for almost a year. We have also used it to design database systems for other organizations. We have also used Unify, and have seen Informix on the Fortune.)

Where Does Progress Fit In?

The people at the **Data Language Corporation**, where Progress was developed, don't like to call Progress a database language, instead they call it an "Applications Development System". They claim that Progress can be used to create systems 10-50 times more efficiently than traditional programming languages such as Fortran or C. In our experience this is true.

Although Progress can be used for the same kinds of applications as database packages like Informix, Rubix, Unify or Sequitor, it does not have the traditional data entry, query, and report modules that many of the others do. Instead, it is a very simple programming language that is used for all of these functions. (The language is called a "Fourth Generation" language because it is four generations removed from machine language. Programming Languages like Fortran are third generation languages.) This gives Progress a continuity and flexibility that is very appealing. Perhaps the best way to explain how the system works is to give some examples.

Suppose we want to start with a mailing list. As with most database systems, it is necessary to setup the "data dictionary". The data dictionary provides the structure for the database -- it tells the system what fields, or pieces of information to include, and what kind of information it is -- either words,

See **Progress**, page 2

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Fortune:Word Glossaries

Starting with this issue, in addition to providing shell scripts in **The UNIX Directory**, we will also try to include Fortune:Word glossary entries in **The Glossary Entry**. (We know it's corny, but hopefully it will be useful.) This month's entry is something quite basic -- doing automatic underlining of words or sentences. In coming issues, we'll include some more complex glossaries. In order to take advantage of this entry, you will need to own the Advanced Glossary features which are part of Extended Fortune:Word and/or Fortune:Word 2.0.

Before you start, if you don't already have a glossary, you will need to create one using the **Glossary Functions** selection from the main Fortune:Word menu. Complete directions for doing this are in the Volume 1 Number Seven issue of **/u/fortune** news. Basically all you do is create the glossary as you would any other document. Once you have created it, type in the following entry:

```
entry u    /*UNDERLINES A SINGLE WORD*/
 {
     mode "u"
          while((char != " ") & (char != ",") & (char != ";") &
          (char != ":") & (char != "."))
           {
               right
           }
     mode "u"
 }
```

We don't have too much room to explain how this works, but here's a quick explanation: The entry begins by turning on underlining (**mode "u"**). The **while** statement checks to see if the character the cursor is on is a space, or any of several common punctuation characters. As long as the character doesn't equal (!=) any of these characters, the entry

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/u/fortune *news. . .*

Editor Josh Lobel
Associate Editors Benzion Chanowitz, Mark Palmerino, Mark Rhodes
Contributors Emily Schulman, Lori Rhodes

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Although every attempt is made to insure that our contents are error-free and without risk, The Cambridge Consortium is not responsible for losses that occur due to correct or incorrect interpretation of **/u/fortune** *news.*

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/u/fortune *news*, 20a Prescott Street, Suite 28, Cambridge, MA 02138. Telephone 617 876-4763.

The text for this newsletter was prepared using the **vi** editor and **Fortune:Word** on a FORTUNE 32:16 computer. It was then transferred using Kermit to a PDP 11/44 computer running UNIX and prepared for typesetting with the **troff** program.

Progress,

Cont'd from page 1

numbers, dates, etc. (Progress currently supports character, date, decimal, integer, and logical values). Generally there also has to be a way to uniquely identify a particular name. Usually this key will be an integer, although it can also be a character variable. Unlike many other systems, the user does not have to know the integer key to find the record, because Progress allows you to search on any field. Together, all of these fields together shall be considered a file called name, and each person entered is a name entry.

Now if we want to add a new name to the system, the actual Progress program could be as simple as:

```
insert name.
```

Insert is part of the Progress language. It creates a new entry and a default screen input form. Then it stores whatever you type in for each of the blanks. If you wanted to look at a list of all of the names, you would type:

```
for each name:
  display name.
end.
```

This sets up a loop, or repeating command, that will continue as long as there are still names. It does just what it says -- for each name in the database, display it on the screen and continue to do this until all of the names are displayed. Although it is not necessary, it is convention to indent the lines within the loops so that it is easy to see the beginning and end of each loop. In Progress these three statements compose a "block" which is signified by the colon at the beginning and the word "end" at the close. If you want to print the list on a printer, only one more line is needed:

```
output to printer.
for each name:
  display name.
end.
```

The output of any program can be sent to the printer, to a file, or into a UNIX pipe by simply specifying the output. Output to printer actually sends the output to a special routine which formats it into pages, and then pipes it through to lpr. This ensures that your data will not be spread across the perforations.

Maybe you only want to see the last names and the cities. No problem. Only slight modifications need to be made.

```
for each name:
  display lastname city.
end.
```

Now instead of listing the entire name entry, only the fields we specify are listed. If you want the names sorted by city, add a phrase:

```
for each name by city:
  display lastname city.
end.
```

As you can see, these commands are more or less intuitive. If you understand a few basic programming principles, it is possible to create simple database systems. Queries are equally simple. This is a sample query:

Continued on next page

Progress, Cont'd from page 2

```
repeat:
  prompt-for code.
  find name using code.
  if available name then update name.
end.
```

This program asks the user to enter the code, then goes into the database and finds the name entry that matches the code. Unlike many other databases, you are not restricted to finding the name entry by entering the code. You could find the name by entering the city, zipcode, phone number, or street address. Without too much effort, you can write your program so that if there is more than one person that matches the name you enter, you will be told there is more than one. The possibilities will then be listed, and you can choose the one you want.

Once there are many names in the system, things could get slow. Like many databases, Progress uses indexes to give you very fast access to your data. With a database of hundreds of thousands of records, the one that you want is called up in a fraction of a second. The technically minded may want to know that Progress uses b-tree indexes -- the rest of us should be satisfied to know that Progress is as fast or faster in retrieving data than any comparable package. Indexes can be added as they are needed. If you suddenly realize you need a report sorted by state, it is a simple matter to create a new index. When the database is large, it may take many minutes to create the index. But once it is there, access time is very quick. In an unusual feature, the indexes can combine several of the fields together. The indexes are useful for queries and also for reports to structure the order of the output.

Using Multi-dimensional Data

Now that the name entries are all set, we want to create the topic entries that were discussed in the database overview in the last issue. (The purpose of the database is to keep track of correspondence sent to everyone on our list. For each name, we will store the topics of the letters they have received.) Each topic will be directly linked to a unique name entry. The way they will be connected is through the code that uniquely identifies the name entry. This connection between the two files, (i.e. names and topics) establishes a relation. This is the essence of a relational database. Progress handles this with ease. If we want to look at each name and print out all of the topic entries that are associated with it, the program would be the following:

```
for each name:
  display name.
  for each topic where topic.code = name.code:
    display topic.
  end.
end.
```

This program uses two loops. The outer loop goes through and displays each name entry. The inner loop takes each name and then looks for each topic where the code matches the name entry, and then displays the topic. When all of the topics are displayed, the program goes on to the next name.

The phrase topic.code refers to the field named code in the file or record called topic. The period is used to specify fields within records. With Progress it is very easy to refer to several different records at one time for reports and for data entry. Creating a screen that enters both the name and the topic on the same screen is a routine task. Since any complex database system will use many record types, this is an essential feature.

We used the line *for each topic where topic.code = name.code* to illustrate this point. In fact, Progress allows us to be more succinct by saying *for each topic of name.* Both lines accomplish the same purpose, but the second version is much simpler.

Using Function Keys and Insert/Delete

Progress can be configured to work on many different types of terminals. We have used it with Fortune, Wyse and DEC VT-100 terminals with no problem. Progress was designed with clear displays and easy input in mind. Unlike some other database programs, with Progress you are free to move anywhere on the screen with the cursor keys. When you arrive at a field you would like to change, you can use the INSERT and DELETE keys to make changes without reentering the entire field. The numeric keypad works on Fortune terminals. Information on a screen can be saved at any time, without moving to the top or bottom of the screen, by simply hitting EXECUTE.

The default screen displays are clear and attractive, with boxes surrounding information that belongs together. If the default is not adequate, there is considerable flexibility which will allow you to create any format you'd like. One criticism of Progress is that although the display flexibility is definitely there, it often takes many tries to get the screen to look just the way you'd like. I'm certain that with more experience with Progress, the number of trials will be reduced, but it still seems more complex than it need be.

Ties to UNIX and other programming languages

For most applications, there is no need to use any programming language other than Progress. Even the Progress Data Dictionary Program is written in the Progress language. However, if you do need to call modules outside of Progress, it is no problem. Piping data to and from any program only requires one line of code.

Memory Usage with Progress

Although Progress is efficient, it does require a healthy amount of memory to run. We would recommend that you have at least 768K of RAM if you want to really be able to use Progress. It will run on 512K, but in certain situations, you will run out of memory. Once it is running, you can use other programs such as Fortune:Word or Multiplan without great performance degradation, although you will notice its presence. At one site we are familiar with, they regularly have 4 or 5 terminals all running a single database with only marginal loss of speed using 1 megabyte of RAM. The performance depends on how heavily each terminal is being used, and how complex your database is. The Data Language Corporation can provide you with exact memory requirements for each part of their system.

Using Progress in a Multi-User Environment

On Fortune computers, Progress can be used with up to 10 users on a single database. If you want to have this many people actively working at the same time, you would need more than 1 meg of memory. In the next release, this total will be expanded. On computers that use System V UNIX, the total number of users is unlimited for Progress. In the multi-user mode, Progress allows a variety of record locking schemes, and also elaborate security possibilities.

See **Progress**, page 4

Progress, Cont'd from page 3

Database Integrity

When you run Progress, a file is created that keeps track of the changes you make to the database. This file is called a "before-image" file. In the event of a system crash, the database will be restored to its last complete state before the crash. This is a very important feature for two reasons. First of all, it means that it is very rare for a database file to be ruined because of a power failure or some other mishap. The second reason is more subtle. Let's say you are going through your database, and changing everyone who has a credit limit of $500 to $750, and everyone with $750 to $1,000. In the middle of running the program that will do this, the computer crashes. How do you know whether the people with the $750 limit have just been raised from $500 or should be raised to $1,000? You don't. So Progress takes the safe course and puts all records back to where they were before any changes were made. If you have ever been in the middle of a General Ledger update and had the system crash, you will know how valuable this is.

Running Progress on Other Computers

Progress runs very well on Fortunes. It also runs on several other UNIX machines, *and* on IBM XT's and AT's. It is a fairly straightforward job to take a whole database including the data and the programs and move them to or from any of these machines. The same application you create on one can then run on many. Informix can also run on several machines, but we have never seen how this works. Data Language Corp. is also working on a port to a VAX, so that you can move a system all the way from a PC to a VAX with no problem.

Conclusion/Is Progress for You?

The first question you need to ask yourself is what will you use a database for. If it is a very simple application that only requires what we call "one-dimensional" information, you can probably use a package like **Unicorn/DB, Records Processing,** or **File-It!** which are available for a good deal less than Progress, e.g. less than $500-$600. These will be adequate for simple databases like mailing lists. (One thing that seems simple but is often complicated is printing out mailing labels when some addresses have five lines and others have three lines. Some systems will leave a blank line in the address, while others will collapse the line producing more attractive output.) If your needs are more complex, you will probably need to move to a more complex system like Informix, Unify, Rubix or Progress.

The second question is whether you will design the system yourself or have an expert do it. If you are going to have someone else do it, Progress is an excellent choice. Because it is so easy to use, it is likely that the development time will be much less for Progress than for another database package. This reduces the cost of development. Once you have the application in-house, you can be assured that Progress will work well with your terminal and be easy to use. If an outside developer is doing the programming, you can save $2,000 by just buying the Run-time version of Progress, which is priced at $350. With Run-time, you can't write any programs, but you can use the compiled programs that have been developed for you. Another option is the Query/Runtime package which is available for $700. With this package you can write programs to do reports and queries, but you do not have the commands that allow you to update your files -- you are still dependent on the developer to provide those programs.

If you are going to do the programming yourself, the main issue is how comfortable you are with computers. Using Progress in its basic modes is not a complicated process, as the examples above show. If you like to experiment, you'll find it fairly easy to learn how to use Progress, and you don't need to be a computer scientist to create some very complicated applications. Obviously if you are more experienced, you will be able to create a powerful application more quickly. One developer we know has arranged his system so that if you enter a name that is not exactly in the system, e.g. Milter instead of Miller, the computer will list the names that are similar and ask if one of them is correct or if you want to enter someone new.

Originally, one of the primary markets for Progress was applications developers -- people who are creating systems for other people. Now that it is running on IBM XT's, there is much more demand from end users. With this in mind, they are beginning to develop some special end user facilities that will make Progress even easier to use. We think that with some interest and dedication, many serious computer users will be able to learn how to program with it.

Support -- The Data Language Corporation

During our use of Progress, Data Language has issued three new releases. As should be expected each new release has incorporated many new features and been practically bug free. Your support for Progress will be probably come from your dealer, but if you ever need help from DLC, they will be happy to provide it. In the instances that we have run into problems, their technical consultants have been knowledgeable and available -- even for repeated phone calls.

Because of Progress' power and ease of use (we have never hit a limit on what we can do), we heartily endorse it. As was mentioned in the editor's note at the beginning of this article, our experience with other packages is limited. Often times people recommend that which they know best, and our recommendation probably falls into this category. However, in conversations with others who have used many systems, Progress is still a system of choice. We converted one system from Unify to Progress because it was much easier for the end user to enter data with Progress. We welcome users of other database packages to write articles about their experience with them. In any case, we suggest you contact several people who use a database package before you buy it. Once you have a package and have started creating a system with it, you will be reluctant to change to another one.

Glossaries, Cont'd from page 2

does whatever is inside the brackets -- in this case, moves the cursor right one space. It keeps checking the characters until it is to the end of the word (indicated by space or punctuation). At that point the **while** test fails and it executes the next **mode "u"** which turns off underlining. This is one way to underline a word. It is not necessarily the most elegant way, but it is good for instruction. Another method is given on page 5-36 of the **Fortune:Word Advanced Glossary Guide**.

Once you enter the above glossary entry, it will be verified when you save the document (CANCEL/DEL out as in any other document). It can then be used by attaching the glossary and hitting **LF/GL u**.

Underlining an entire sentence is essentially the same program with a different while statement:

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Software Index, Cont'd from page 1

"business software" — accounting packages, vertical applications, etc. If you are looking for an accounting package, we suggest that you also contact the various database vendors (included in the next issue) because many of them have accounting packages that have been developed using their system. We will try to collect all of this information and summarize it in the near future.

Using the Listings

The product listings are sorted by application and within categories alphabetically by title. Each listing includes the name of the product, the name of the ISV, the star rating (e.g. FIVE*), the price, source language, and finally whether the source is available. In some cases, particularly with the accounting software, the price is followed by **(m)**. This means that the package is modular (e.g. accounts payable, general ledger, etc.) and that the price given is an average price **per** module. Following the software listings, there is a list of addresses and phone numbers for the ISV's.

We are publishing this index as a service. We regret an any inadvertant errors or omissions in this list, and are not responsible for such. We expect to revise and update this list on a regular basis. Your dealer should have more information on any of the products contained in this list.

ACCOUNTING FIRMS

APPGEN Accountant's Client Write-up
Software Express, Inc, FIVE★, $3500, C/y
Glows Practice Management
Orion Software, Inc., GOLD★, $2500, SMC BASIC/n
Glows/Client Accounting System
Orion Software, Inc., GOLD★, $3500, SMC BASIC/n
Public Accountant Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y

ACCOUNTING, GENERAL

Accounting Power
Software Power Coproration, GOLD★, $1200(m), Informix/y
APPGEN Accounts Payable
Software Express, Inc, FIVE★, $600, C/y
APPGEN Accounts Receivable
Software Express, Inc, FIVE★, $600, C/y
APPGEN Fixed Asset Management
Software Express, Inc, FIVE★, $2000, C/y
APPGEN General Ledger
Software Express, Inc, FIVE★, $600, C/y
APPGEN Inventory/Order Entry
Software Express, Inc, FIVE★, $600, C/y
APPGEN Payroll
Software Express, Inc, FIVE★, $600, C/y
Business Accounting Control System
American Business Systems, BLUE★, $600(m), RM COBOL/y
Conetic Systems C Books
Conetic Systems, Inc., FIVE★, $800(m), C/n
Fox General Ledger
Fox Productions, BLUE★, $10000, SMC BASIC/y
General Accounting
Spectra Data Systems, GOLD★, $795(m), SMC BASIC/y
General Accounting System
ADD+ON Systems, BLUE★, $1000(m), SMC BASIC/y
General Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y
Guardian Accounts Payable
Guardian Automated Systems, GOLD★, $395, C/n
Guardian Accounts Receivable
Guardian Automated Systems, GOLD★, $395, C/n
Guardian General Ledger
Guardian Automated Systems, FIVE★, $395, C/n
Integrated Accounting
Trac Line Software, Inc., FIVE★, $695(m), RM COBOL/n
Payroll
Intermountain Computer Systems, BLUE★, $1000, SMC BASIC/y
RealWorld/MBSI Accounts Payable
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI Accounts Receivable
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI General Ledger
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI Inventory Control
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI Order Entry/Billing
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI Payroll
RealWorld Corporation, FIVE★, $695, RM COBOL/y
RealWorld/MBSI Sales Analysis
RealWorld Corporation, FIVE★, $350, RM COBOL/y
TetraPlan Business Accounting
Tetra Business Systems, Ltd., BLUE★, $1000(m), C/n

ATTORNEYS, CERTIFIED PUBLIC ACCOUNTANTS, CONSULTING FIRMS

APPGEN Professional Time Reporting
Software Express, Inc, FIVE★, $2500, C/y
Attorney Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y
Case Management Systems
Guardian Automated Systems, FIVE★, $3000, C/n
Legal Accounting
Guardian Automated Systems, FIVE★, $3750, C/n
Legal Services System
PAC Corporation, BLUE★, $2995, SMC BASIC/y
The Law Office Manager
Integrated Circuit System, BLUE★, $3995(m), C/n
Time & Financial Management Sys for Lawyers
Gill and Piette, GOLD★, $6000, BASIC/y
Time Billing
Computer Consulting, BLUE★, $595, SMC BASIC/y

AUTO COMPANIES, AUTOMOTIVE SUPPLIERS, PRECISION MFG

Statistical Process Monitor
Salerno Computer Systems, BLUE★, $15000, FORTRAN 77/n

BOOKSELLER, RETAIL

booker
B. Daves Rossell, BLUE★, $N.A., C/n

CHEMICAL MANUFACTURING, COMPOUNDING, MIXING & BLENDING

CPS Chemical Process System
DataLogiX Formula Systems, Inc., GOLD★, $4000(m), SMC BASIC/y

CLUBS, ANY ORGANIZATION WITH MEMBER DUES

Club Management Plus (CM+)
Computer Outfitters, BLUE★, $1000(m), SMC BASIC/y

COLLECTION AGENCIES, CREDIT BUREAUS, BILLING SERVICES

Collection Agency
The Data Directions Group, GOLD★, $7500, SMC BASIC/y

Software Index,

Continued from page 5

CONSTRUCTION, CONTRACTORS, MANUFACTURERS, PRINTERS, ARCHITECTS

A&M Manufacturing Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y
APPGEN Job Cost
Software Express, Inc, FIVE★, $1500, C/y
Basic Job Costing
Basic Software Corporation, GOLD★, $1495, SMC BASIC/y
CMI Profit
Computer Methods, Inc., BLUE★, $N.A., SMC BASIC/y
Construction Management and Accounting System
PAC Corporation, FIVE★, $1500(m), SMC BASIC/y
Contractor Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y
Job Cost
Spectra Data Systems, GOLD★, $795(m), SMC BASIC/?
Masterspec
Vertico, GOLD★, $750, ASCII Text/y
Project Control Management System
Creative Software Systems, GOLD★, $1500(m), BASIC/y
Residential Contractor Business Mngmt System
TOM Software, BLUE★, $N.A., TOMBASIC/y

DISTRIBUTION

Distribution Accounting
Spectra Data Systems, GOLD★, $795(m), SMC BASIC/?
Distributor Business Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y

EDUCATIONAL ADMINISTRATION

Student Records System
Computer Applications, GOLD★, $4000(m), BASIC/y

ELECTRICAL AND LIGHTING MANUFACTURERS

Electrical & Lighting Manufacturers
Database Concepts, BLUE★, $6800, SMC BASIC/y

ENTERTAINMENT MANAGEMENT -- PROMOTERS

FOXPRO
Fox Productions, BLUE★, $15000, SMC BASIC/y
Talent Agency Database
Fox Productions, BLUE★, $15000, SMC BASIC/y

FINANCIAL INSTITUTIONS AND SERVICES, BANKERS, BROKERS

Escrow
Thomas Langford, Inc., BLUE★, $8000, APPGEN, C/n

FLORIST, RETAIL

FLORA
Systems Performance of America, Ltd., GOLD★, $5500, SMC BASIC/y

INSURANCE COMPANIES, ACTUARIES, PETROLEUM

Insurance Management System
Thomas Langford, Inc., BLUE★, $6000, /y

MEDICAL

CISMED
Computer Information Services of New Mexico, BLUE★, $3000, SMC BASIC/y
Clinic Management system
Logic One, BLUE★, $4495, SMC BASIC/y
Hospital Incident Reporting System
Heisler Granzow Associates, Inc., BLUE★, $7500, RUBIX/n
MDX
Clinical Data Design, FIVE★, $2000(m), C/n
MEDI:FOR
Sumware, Inc., GOLD★, $3500, SMC BASIC/y
Medical Billing
Spectra Data Systems, GOLD★, $795(m), SMC BASIC/?
Medical Grp/Clinic Management Information Sys
TOM Software, BLUE★, $N.A., TOMBASIC/y
The Resident
Wallaby Software Corp., FIVE★, $995(m), C/n

NON-STOCKING REPRESENTATIVES

Manufacturers' Representative System
Ficor, FIVE★, $4995, SMC BASIC/y

NOT-FOR-PROFIT ORGANIZATIONS

NFP Management System
Data Solutions, Inc., GOLD★, $4000(m), BASIC/y
Not-for-Profit Operations Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y

PARISHES, ROMAN CATHOLIC

Parish Management System
Guardian Automated Systems, GOLD★, $N.A., C/n

PERSONNEL

Kompact Personnel Accounting
Uni-Komp, Inc., BLUE★, $395, SMC BASIC/y

PROFESSIONAL SERVICES, PROJECT-ORIENTED ENTERPRISES

PASS, Pioneer Automated Scheduling Systems
Pioneer Applications, BLUE★, $1955, PROGRESS/C/n

PROPERTY MANAGEMENT

Property Management
Spectra Data Systems, GOLD★, $795(m), SMC BASIC/?
Property Management
Thomas Langford, Inc., BLUE★, $2000, APPGEN, C/n
Property Management (Commercial/Residential)
Computer Consulting, BLUE★, $1485, SMC BASIC/y
Property Management Business Info. System
TOM Software, BLUE★, $N.A., TOMBASIC/y

RESTAURANTS

Restaurant/Food Service Mgmt Info System
TOM Software, BLUE★, $N.A., TOMBASIC/y

STOCKBROKERS, FINANCIAL PLANNERS, PORTFOLIO MANAGERS

Triangle Broker System
Triangle Computer Company, GOLD★, $6995, C/n

TITLE INSURANCE

Genesis
Title Data, Inc., GOLD★, $5500, C BASIC/n

TRADERS, INVESTMENT BANKERS

Portfolio Management System
Logic One, BLUE★, $1295, SMC BASIC/y

Continued on next page

WHOLESALE

PROPHET
Responsive Computer Systems, Inc., BLUE★, $500(m), SMC BASIC/y

WHOLESALERS, MERCHANT DEALERS

Cataloged Ordering
The Data Directions Group, BLUE★, $5000, SMC BASIC/y

Software Company Index

The following list contains names, addresses, and phone numbers for the companies that have software listed in part one of our software index. By and large, the listings are self-explanatory. Please note that the Five Star product vendors have Fortune Systems Corp's phone number listed rather than their own because Fortune is the distribution channel for these products. Their phone numbers have been marked with an asterisk.

ADD+ON Systems, Suite 503, 23881 Via Fabricante, Mission Viejo, CA 92691, **(714) 855-3007**

American Business Systems, 3 Littleton Road, Westford, MA 01886, **(617) 692-2600**

B. Daves Rossell, 14 Linden Place, Summit, NJ 07901, **(201) 273-5143**

Basic Software Corporation, 5201 Powhatan Street, Baltimore, MD 21207, **(301) 448-9460**

Clinical Data Design, 4718 West Lisbon Ave., Milwaukee, WI 53208, ***(415) 593-9000**

Computer Applications, 5150 E. Pacific Coast Hwy., Suite 200, Long Beach, Ca 90804, **(213) 494-0300**

Computer Consulting, Suite 206, 7002 Moody Street, La Palma, CA 90623, **(213) 865-9533**

Computer Information Services of New Mexico, 12800 Lomas Blvd, NE, Suite H, Albuquerque, NM 87112, **(505) 292-4555**

Computer Methods, Inc., 10335 W. Oklahoma Avenue, Milwaukee, WI 53227, **(414) 327-4471**

Computer Outfitters, 1518 E. Broadway, Tucson, AZ 85719, **(602) 622-7707**

Conetic Systems, Inc., 1800 S.W. First Avenue, Suite 180, Portland, CA 97201, ***(415) 593-9000**

Creative Software Systems, 399 Sherman Ave., Suite 11, Palo Alto, CA 94306, **(415) 595-4928**

Data Solutions, Inc., Suite 208, 1015 E. Hillsdale Blvd., Foster City, CA 94404, **(415) 574-3230**

Database Concepts, PO Box 3506, Arcadia, CA 91006, **(818) 574-0184**

DataLogiX Formula Systems, Inc., 5 Keating Place, Hartsdale, NY 10530, **(914) 997-1627**

Ficor, 10200 Chester Road, Cincinnati, OH 45215, ***(415) 593-9000**

Fox Productions, 59 West Germantown Pike, Norristown, PA 19401, **(215) 275-8789**

Gill and Piette, 908 Pennsylvania Ave. SE, Washington, DC 20003, **(202) 546-6170**

Guardian Automated Systems, 420 Main Street, Suite 600, Buffalo, NY 14202, **(716) 842-6410**

Heisler Granzow Associates, Inc., 216 16th Street, Suite 1700, Denver, CO 80202, **(303) 820-5243**

Integrated Circuit System, 333 East Ontario, Chicago, IL 60611, **(312) 642-0707**

Intermountain Computer Systems, 2399 S. Orchard, Boise, ID 83705, **(208) 344-4255**

*This is a Five Star Vendor, phone number is for Fortune System Corporation. See introductory notes.

Logic One, 129 North West Street, Wheaton, IL 60187, **(312) 690-8208**

Orion Software, Inc., Lafayette Bldg. Suite 910, 5th & Chestnut Street, Philadelphi, PA 19106, **(215) 928-1119**

PAC Corporation, 1617 St. Mark's Plaza, Suite A, Stockton, CA 95207, **(209) 951-8697**

Pioneer Applications, 49 Walnut Street, Wellesley, MA 02181, **(617) 237-5478**

RealWorld Corporation, Dover Road, Chichester, NH 03263, ***(415) 593-9000**

Responsive Computer Systems, Inc., 1767 Veteran's Memorial Hwy, Central Islip, NY 11722, **(516) 234-5200**

Salerno Computer Systems, 4175 East Ten Mile Road, Warren, MI 48091, **(313) 756-9292**

Software Express, Inc, 2529 Briarpark Boulevard, Suite 700, Houston, TX 77042, ***(415) 593-9000**

Software Power Coproration, 1901 Avenue of the Stars, Suite 1774, Century City, CA 90067, **(213) 476-8225**

Spectra Data Systems, Suite 130, 15643 Sherman Way, Van Nuys, CA 91406, **(818) 785-4923**

Sumware, Inc., Suite 101, 23121 Verdugo Drive, Laguna Hill, CA 92653, **(714) 855-3062**

Systems Performance of America, Ltd., 928 South Crest Street, Wheaton, IL 60187, **(312) 690-1868**

Tetra Business Systems, Ltd., 14-16 Temple End, High Wycombe Bucks, HP135DR, **494 452 001**

The Data Directions Group, 10 Valley View Road, Derby, CT 06418, **(203) 734-2688**

Thomas Langford, Inc., 2001 Carlisle Blvd. NE, Albuquerque, NM 87110, **(505) 256-3794**

Title Data, Inc., 3540 S. Poplar Street, Denver, CO 80237, **(303) 759-5344**

TOM Software, PO box 66596, 127 SW 156th Street, Seattle, WA 98166, **(206) 246-7022**

Trac Line Software, Inc., 51 Alpha Plaza, Hicksville, NY 11801, ***(415) 593-9000**

Triangle Computer Company, 200 West Mercer Street, Suite 300, Seattle, WA 98119, **(206) 282-8466**

Uni-Komp, Inc., 9803 Rocktree, Houston, TX 77040, **(713) 937-7782**

Vertico, 444 S. Indian Avenue, Palm Springs, CA 92262, **(619) 323-4555**

Wallaby Software Corp., 79 N. Franklin Turnpike, Ramsey, NJ 07446, ***(415) 593-9000**

Glossaries,

Cont'd from page 4

```
entry U   /*UNDERLINES A SENTENCE*/
 {
    call display(false)
    mode "u"
    while((char != ".") & (char != "?") & (char != "!"))
          {
             right
          }
    mode "u"
    call display(true)
 }
```

The main difference is that with this **while** test, the cursor keeps moving right until it hits a punctuation mark that will end a sentence, e.g. ".", "?", or "!". The **call display(false)** statement at the beginning turns off the display while the entry is running. It is turned back on at the end. This makes the glossary entry much faster. Note that this entry is called **U** as opposed to the **u** of the first one. Both upper and lowercase labels can be used for entry names.

By substituting other modes instead of **mode "u"**, you can automatically boldface, double-underline, or add any other attribute.

The next issue will include a glossary entry for automatically typing the address for envelopes and copying it to your letter.

New Documentation Available For Fortune:Word

Self-paced courseware announced

If you need more help with Fortune:Word, there are some new instruction manuals that could prove very useful. Two manuals, **An Operator's Guide to Fortune:Word** and **An Operator's Guide to Extended Fortune:Word**, have been revised. In addition, Fortune has created some new books. The first is called **Fortune:Word Quick Guide**. This is a spiral bound book that is designed to sit next to your computer and act as a quick reference guide. It is much more approachable than the full manual. The much needed **Fortune:Word Advanced User's Guide** explains all of the in's and out's involved in using Fortune:Word's powerful glossary features. This book includes many useful examples of glossary entries.

Fortune has also announced the first course in their self-paced teaching guides, **How to Use Fortune:Word Processing**. This guide teaches the fundamentals of Fortune:Word, as well as how to use Hyphenation and Pagination. It is also packaged in a spiral bound book, and is designed for first-time users as well as those who want to review specific Fortune:Word functions. It is available from Fortune dealers for $60.

News About Fortune,

Cont'd from page 1

If you receive this before July 31, don't forget that that's the deadline for the $595 upgrade offer from Basic Fortune:Word to the full Extended Fortune:Word package.

There are new releases of the **BAS Payroll (1.2.1)** and **Tape Streamer (1.1)** programs. Both programs incorporate many new features as well as general improvements in their operation. The Tape Streamer allows multi-volume backups. Contact your dealer for more information.

We don't have it in writing, but we've heard that the **SX** is out. The SX's 68000 microprocessor runs at a clock speed almost double that of its other Fortune siblings. This also generates performance improvements. No word on upgrades as yet. . .

FOR SALE

Hart Tours in New York has upgraded their Fortune System and wants to sell their "almost-new/six month old" computer. It is a PS 20 with 512K memory and a 20-megabyte hard disk. It has a Comm A board, along with For:Pro 1.7.4, Fortune:Word, Records Processing, and Handshake ITE. Call Al Hartheimer at 518 439-6095 with your best offer.

Pat Tyler in Washington, D.C. also has a 20-megabyte system for sale. It has 1 megabyte of memory installed along with a 4-port Comm A board, Fortune:Word, and possibly other software. It is 18 months new. Asking price is $6,900. For more information call Pat Tyler at 301 831-8696.

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20A Prescott Street
Suite 28
Cambridge, MA 02138

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Newsletter for Users of the Fortune 32:16 Computer **Volume 2 Number Four**

FORTUNE Stirs It Up

We attended the Fortune Systems Corporation **Stir It Up** presentation in New York on July 26. "**Stir It Up**" is the name given to a campaign of presentations scheduled for several major cities in the United States and slated for at least one European stop. The major focus of the campaign is an impressive list of software and hardware Fortune Systems is announcing as ready for immediate release. In this article we will list the products announced, describe some of them and relate our experiences while attending the Stir It Up presentation.

Fortune Systems is clearly serious about these presentations as a marketing move. We arrived early and had the chance to talk with a number of Fortune personnel over coffee, juice and danishes. Before the presentations began, we were able to talk with James Campbell, President of Fortune Systems, Richard Siegel, Vice-President of Marketing and William Binch, Vice-President of Sales. Each of them reiterated that Fortune Systems is proud of the offerings they were announcing and were attempting to "stir up" the right kind of interest in their products.

The presentations began with Richard Siegel introducing James Campbell who gave a talk which stressed how Fortune is committed not only to producing quality, high-performance software and hardware but is very interested in being a financially healthy company. Utilizing flawlessly timed projectors, Mr. Campbell showed how Fortune has been trimming its operation so that they could become profitable. Apparently his strategy is working because Fortune was able to announce a profit for the second quarter of 1985.

Richard Siegel then spent some time giving an overview of the products and how they fit in a comprehensive marketing plan geared to renewing interest in Fortune's products, especially as they relate to the office environment. One important point that was made evident through the announcements and the prices associated with the products, is that Fortune is attempting to improve the price/performance ratio of its products.

They have significantly lowered the price on a range of products that are currently available. Hence, they have both increased performance of the computer and decreased prices. (See Table 1 for a list of prices associated with the newly announced products. Table 2 shows how Fortune's new prices increases the price/performance ratio's for some of its products in terms of cost per user).

After this, Mr. Siegel introduced, in turn, various Fortune employees who described some of the products being announced. The formal presentation concluded with an invitation to those present to walk around and become acquainted with the products which were on display.

We were informed that the "Stir It Up" campaign is Richard Siegel's "brainchild" and we wish to congratulate him and Fortune Systems Corporation for taking steps to enhance the image of their company and products. The presentation was professionally done and we assume will be quite successful in generating interest in Fortune.

To quote Fortune, "Fortune Systems is pleased to announce over 25 major new products and product enhancements that are available for shipment during the current quarter. This is

See **Stir It Up**, page 3

Featured in this Issue. . .

The Glossary Entry

In our last newsletter, we gave a very brief introduction to the use of glossaries in Fortune:Word. **The Glossary Entry** will be a regular column in **/u/fortune** news which will contain a useful glossary entry along with an explanation of its use. We hope that these examples will help our readers to become more proficient in the use of Fortune:Word Glossaries.

What are glossary entries?

We've spoken about this some in past issues, but here's a brief refresher. (For a full review of basic glossary use, see Volume 1 Number 7, page 1). Glossary entries can have two kinds of uses. The more basic kind is simply a set of keystrokes that is stored and can be called back by pressing the LF/GL key followed by one other key. This is a sort of *player-piano* approach to glossary use. Instead of typing in your company address or the closing on a letter or the same paragraph repeatedly, a glossary entry allows you to type it just once. This kind of glossary is usually created with a method called **glossary by example**. It can often be entered while you are editing your Fortune:Word document. Basic instructions for creating glossary entries this way are given below.

The other kind of entry uses the advanced features of Fortune:Word Glossaries, and provides the power of a programming language. This kind of glossary entry is only available with **Fortune:Word 2.0** or the **Advanced Features** module of earlier versions of **Fortune:Word**. Glossaries like this are entered and edited just like any other **Fortune:Word** document. This month's **Glossary Entry** needs to be entered in this second way.

Please note that whether you enter your glossary entry as a glossary by example or by typing it in from scratch, it ends up as text in your glossary document. The difference is that when you use the glossary by example method, the computer generates the command words in the glossary for you.

See **Glossary Entry**, page 2

Fortune Software Index -- Part Two

In last month's **/u/fortune** *news,* we published an index of "Business Software" from Fortune's Software Catalog. This included vertical market applications from Fortune as well as from Independent Software Vendors. In the second half of our index of Fortune's Software Catalog, we list products for Communications, Office Automation, Professional Tools, and System Development.

The listings include the name of the product and the product's vendor. Also listed is the Fortune STAR rating,

See **Software Index**, page 6

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/u/fortune *news. . .*

Editor Josh Lobel
Associate Editors Benzion Chanowitz, Mark Palmerino, Mark Rhodes
Contributors Emily Schulman, Lori Rhodes

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Glossary Entry,

Cont'd from page 1

Basic Review of Glossary Use

Creating an Empty Glossary: To create an empty glossary go to the **Glossary Functions** selection on the Fortune:Word Menu and choose **Create New Glossary**. Then, create the glossary as you would any other document. Notice that when you CANCEL/DEL out of the glossary and save it, the message *verifying* appears at the bottom of the screen, and then you get a message that an empty glossary is attached.

Attaching a Glossary: Before you can use a glossary document in Fortune:Word, it must be attached. It is possible to have as many glossaries (glossary files) as you want -- you might have one for letters, one for reports, one for a book on metaphysics, etc. All of them could have a glossary entry called **a**. Attaching a glossary tells Fortune:Word which glossary file it should use at any particular time. You can attach a glossary using the **Glossary Functions** Menu, but the easiest way is to hit **F13 LF/GL** (that's the COMMAND key followed by the blue LF/GL key). The message *Which Glossary?* will appear in the upper right corner. Enter the glossary name and press **EXECUTE** and you're attached. The glossary will remain attached until you log off of Fortune:Word or attach a new glossary.

Creating Glossary Entries: Once you have created an empty glossary and attached it, you can begin filling it with glossary entries. To create a glossary *by example*, you must be currently editing a Fortune:Word document. Type **MODE LF/GL** and the message *Glossary Entry* will blink at the bottom of the screen. From that moment, every key you press will be a part of the glossary entry. When you are done, again press **MODE LF/GL** and the message *which entry* appears at the top right of the screen. Press any single character (letters or numbers, shifted or unshifted) and that key will become the **label** for your entry. To recall the entry, simply press **LF/GL** followed by the single character label.

The other method for creating glossary entries is to edit them as you would any other document. This is the method that we will use to enter this month's **Glossary Entry**.

Getting Started

If you have never edited a glossary before, we suggest you start by following the instructions given above to create an empty glossary and a glossary entry by example. Try it out to see if it does what you expect it to. Don't worry about mistakes -- there are ways to correct them.

Once you've generated an entry or two in the glossary document, get back out to the menu and choose the **Edit Old Document** selection. Type in the name of the glossary, and proceed as usual. When the glossary document comes up on the screen, you should see something like this:

```
entry a
{
    "This is a glossary entry" RETURN(2)
    TAB "This is how a keyword works"
}
```

There are a few things to note in this example and in the one you have created. First, all glossary entries begin with a line like **entry a**. This identifies the glossary entry with its label. The glossary entry above would be used by hitting **LF/GL a**. The next line is always an open curly-bracket ({), and the last line is always a closed curly-bracket (}). When a glossary entry is called, everything *between* the two brackets will be done. **Text** is always enclosed in double quotes. Functions like RETURN, BACKSPACE and TAB are written out -- these are called **key words**. Note that the glossary entry ignores the triangles that normally specify these characters -- they must be written out in English. It doesn't matter whether they're

See **Glossary Entry**, page 4

Stir It Up, Cont'd from page 1

the largest number of products introduced at any one time in the history of the company, and is, in fact, believed to be the largest number of products ever introduced at the same time by any microcomputer system vendor."

What follows is a list of the products announced:

High Performance Fort/ne 32:16 SX Series

- SX45
- SX70
- SX45T
- SX70T
- SX Upgrade Kits
- 70MB Disk Expansion Cabinet

FOR:PRO 1.8

- FOR:PRO 1.8 Update
- FOR:FROG

Fortune 1000 Intelligent Workstations

- Fortune 1000 Basic Workstation
- Fortune 1000 MS-DOS Workstation
- Fortune 1000 Graphics Workstation

Communication Products

- 3270 SNA
- X.25
- Fortune:Link

Office Productivity Tools

- Fortune:Windows
- Extended Fortune:Word Update
- Multiplan Update
- RUBIX
- Laserjet Interface

Graphics Products

- Graphics Co-Processor
- Tektronix Emulator
- Graphics Workstation
- Graphwriter
- GSS Graphic Software Products

Five Star Software Products

- Autograph Business Graphics
- High Tech Business Graphics
- Philon Fast Compilers
- Status-M Text Retrieval System
- APGEN Application Generator
- Glows Client Write-Up Package
- PAC Job Costing and Construction Package
- Trac Line Retail Point-of-Sale Package
- VUE Project Management Package

In this report, we can not possibly do justice to all of the new announcements, but there are a several that are worth noting. In large part, the following descriptions are taken from the press releases provided by Fortune. However, we did have the opportunity to see some working demonstrations. In future issues, we will review some of these products in depth.

The High Performance SX series

The SX series that is being introduced represents a step up in performance and power. At the heart of the SX is a 12MHZ MC68000 family microprocessor which can process its instructions twice as fast as its 6MHZ counterpart in the Fortune PS and XP series computer. The speed of this processor is coupled with, at the high end, an 85 MByte (70 MBytes when formatted) hard disk which has a 28 millisecond average access time and a 60 MByte tape streamer backup inside the main cabinet. The increased clock speed and better disk access time will result in a 20-40 percent increase in total system speed, depending on your applications. Finally, the SX series allows one to expand the internal memory up to 2 MBytes. In general, the SX series consists of a computer with either a 45 MByte drive (SX45) or a 70 MByte drive (SX70). Either of these can include a 60 MByte tape streamer backup unit inside the main cabinet (SX45T or SX70T). (Note: Fortune is also offering a kit that would allow any PS or XP system to be upgraded to an SX).

FOR:PRO 1.8

A new version of FOR:PRO is available that incorporates a number of improvements. First, it improves performance for random disk reads by approximately 10% over 1.7. Second, it supports the "alternate" console feature which allows the user to configure any port on the system to be the console. (Note: In order implement this you need to update the MOMROM - A MOMROM upgrade kit is available separately for users who want to upgrade their existing 32:16 to take advantage of the alternate console capability.) Third, 1.8 supports up to three Comm A boards within the system. FOR:FROG is a utility which optimizes disk performance by reorganizing the file system on a hard disk. (FROG = File ReOrGanizer). This utility, which is the first of its kind available in the UNIX community will yield significant performance improvements. In the past, the only real way to restructure your file system was to back up everything from your hard disk and do a cold boot. It should be clear that FOR:FROG is a nice addition to the Fortune arsenal.

Fortune 1000 Intelligent Workstations

The basic Fortune 1000 workstation is in essence a terminal which can be connected to the Fortune 32:16. It has a 14" display and comes with a modified keyboard which is similar to the standard Fortune keyboard but has four additional keys that provide compatibility with MS-DOS, the operating system for IBM computers. The basic workstation is designed to be upgradeable to both the Fortune 1000 MS-DOS workstation and the graphics workstation. The MS-DOS workstation is essentially an IBM compatible computer that features 128 kb of memory, 2 serial ports, 1 parallel port and space for two half-height diskette drives (it comes with one drive). It functions in either MS-DOS or Fortune mode. MS-DOS aplications install and execute locally, while Fortune applications are emulated through Fortune:Works software. The Graphics workstation provides a high resolution graphics display of 720 x 704 with the Fortune 1000 System Unit and a Tecmar Graphics Master Board.

Communication Products

Three products have been introduced here. First, Fortune has released a **3270 SNA Emulator** which is a combination of software and hardware that allows a Fortune 32:16 to communicate with an IBM compatible mainframe through remote attachment. Second, Fortune has an **X.25** product that supports the X.25 protocol conforming to the CCITT recommendations. X.25 protocol is an international standard protocol, recommended by CCITT, for the communication between computer systems via public data networks. It is the standard communication protocol in most European countries as well as several Far East countries. Third, Fortune has introduced **Fortune:Link,** a local area network utilizing a token ring scheme based on Datapoint's ARCnet(tm). It is a combination of hardware and software which can support up to 255 devices (computers, printers, modems, etc.) connected in a network that allows users on any machine to transfer files between 32:16's transparently and quickly, to spool files to remotely connected printers and to log into any Fortune on the network as an ordinary user to that 32:16.

Office Productivity Tools

Certainly one of the most exciting products introduced is **Fortune:Windows.** Touted as software that will "change the way people work," Fortune:Windows is an impressive system that allows a single user to run many different programs at the same time. By setting up different "windows", a user can open a Fortune:Word document and a Multiplan file at the same time. Functions in Fortune:Windows allow the extraordinarily easy transfer of information from one program to another. For instance, with Fortune:Windows one can take the information in a Multiplan worksheet and embed it in a word processing document - all with only a few keystrokes.

See **Stir It Up**, page 10

upper or lower case, though they should be one or the other: RETURN or return is OK, but Return is not. A complete listing of these keywords is included in the **Fortune:Word Advanced Glossary Guide**. We will explain the keywords we use here. Many of the keywords are functions that you could normally do from the keyboard, like RETURN, MODE, etc., but there are others that are part of the Glossary Language. Those are less intuitive and will have to be learned.

When you edit a glossary, you will notice that as you save it and go back to the **Fortune:Word** menu, the message *verifying* will appear at the bottom of the screen. When the glossary is verified, **Fortune:Word** checks to be sure that it can understand all of the glossary entries. If there aren't any problems, you will go directly back to the **Fortune:Word** menu. If there are errors, you will get a message telling you how many errors there are. If you press **RETURN** when you get this message, you will be back in the glossary document. If you then go to the workpage of the document (which is numbered as page "W" and can be accessed by hitting **GO-TO-PAGE W**) you will see a list of the errors that were found and on which lines they occurred. Go back and fix them (you can get to the pages with the problems by typing **GO-TO-PAGE n**, where n is the number of the page with the mistakes), and try to save it again. You can repeat this process again and again until all of the errors are gone. Often errors are caused by typing mistakes, like leaving out a quotation mark around a line of text or leaving out a bracket.

This month's **Glossary Entry** was created by Dick Dow, of Dow Information Systems in Hope, Rhode Island. It presents one solution to the problem of addressing envelopes within **Fortune:Word**. With Dick's glossary entry, you are prompted to enter the recipient's name and address. Once you have finished, the name and address are formatted for an envelope, a page break is inserted, the name is copied down onto the top of the next page, the date is inserted, and you are prompted for the salutation. To print the envelope and letter, you can either use a multi-bin sheet feeder and send the envelope to the correct bin, or just print in sheet mode and feed the envelope and stationary in by hand. In either case, you don't have to worry about formatting and retyping, etc. Just remember that page 1 will be the envelope and that the letter starts on page 2.

Here it is. Please note that we have tried to format it exactly as you will see it on your screen, with the exception of the line numbers on the left. These are used as a reference to the notes that follow.

```
1   /*****************************************************/◀
2   /*    ENTRY a     LETTER ADDRESS        Dick Dow */◀
3   entry a◀
4   { ◀
5    ◀
6      ▶tab call prompt ("enter name")◀
7      ▶call keysin return◀
8      ▶call prompt ("")◀
9      ▶tab call prompt ("enter address 1")◀
10     ▶call keysin return◀
11     ▶call prompt ("")◀
12     ▶tab call prompt ("enter address 2")◀
13     ▶call keysin return◀
14     ▶call prompt ("")◀
15     ▶tab call prompt ("enter address 3")◀
16     ▶call keysin return◀
17     ▶call prompt ("")◀
18   ◀
19     ▶insert PAGE copy format "2" execute execute◀
20     ▶call z◀
21  } ◀
22   ◀
23  /*****************************************************/◀
24  /*     ENTRY z     Formats top of letter          */◀
25   ◀
26  entry z◀
27  { ◀
28   ◀
29     ▶call display(false)◀
30     ▶return (10)◀
31     ▶goto "b"◀
32     ▶copy return(4) execute◀
33     ▶goto "e" backspace execute◀
34     ▶up(4) delete execute◀
35     ▶down delete execute◀
36     ▶down delete execute◀
37     ▶down delete execute◀
38     ▶down return(1)◀
39   ◀
40     ▶/* Insert Date using Entry D to format it */◀
41     ▶call D◀
42     ▶return(3)◀
43     ▶"Dear "◀
44     ▶call display(true)◀
45     ▶call prompt ("enter salutation")◀
46     ▶call keysin ":"◀
47     ▶call prompt ("")◀
48     ▶return(2)◀
49  } ◀
50  /*****************************************************/◀
51  /*  ENTRY D     Reformats date to look nice    pg 5-76 */◀
52   ◀
53  entry D◀
54  { ◀
55     ▶today = date  /*e.g. Mon Aug 15 16:29:00 1985 */◀
56   ◀
57     ▶month = substr(today,5,7)◀
58    ▶ ▶if(month == "Jan")  {month = "January " jump makedate}◀
59    ▶ ▶if(month == "Feb")  {month = "February " jump makedate}◀
60    ▶ ▶if(month == "Mar")  {month = "March " jump makedate}◀
61    ▶ ▶if(month == "Apr")  {month = "April " jump makedate}◀
62    ▶ ▶if(month == "May")  {month = "May " jump makedate}◀
63    ▶ ▶if(month == "Jun")  {month = "June " jump makedate}◀
64    ▶ ▶if(month == "Jul")  {month = "July " jump makedate}◀
65    ▶ ▶if(month == "Aug")  {month = "August " jump makedate}◀
66    ▶ ▶if(month == "Sep")  {month = "September " jump makedate}◀
67    ▶ ▶if(month == "Oct")  {month = "October " jump makedate}◀
68    ▶ ▶if(month == "Nov")  {month = "November " jump makedate}◀
69    ▶ ▶if(month == "Dec")  {month = "December " jump makedate}◀
70   ◀
71     ▶[makedate]◀
72   ◀
73     ▶day = substr(today,9,10)◀
74   ◀
75     ▶thisyear = substr(today,20)◀
76   ◀
77     ▶year = cat(",",thisyear)◀
78   ◀
79     ▶thisday = cat(month,day)◀
80   ◀
81     ▶currentdate = cat(thisday,year)◀
82   ◀
83     ▶call feed(currentdate) return◀
84  } ◀
```

Using the Glossary Entry

This glossary entry is used to format an address for an envelope and copy the same address to the heading of a letter. It will put the envelope address on page one of the document, and the letter and text will start on page two. When you print the document, just insert an envelope for the first page. The easiest way for those without expensive sheet feeders to do this is to use the **SHEET** option on the Fortune:Word Print Menu so that the printer will pause and wait for you to insert each sheet.

In order to make the glossary entry work, you'll need to set up a special prototype document which contains the correct format lines. You can create a new prototype document as you would any other document. You may want to call it something like **0001.** By starting prototype names with 0, they will all be listed together in your index. Once you have created the document and are on the editing screen, hit the **Format** key and go up and space over all of the tabs until you get to 48. This erases all of the tabs before 48. Put a tab at 48, which will be the left margin of the name and address on

the envelope. Continue to the right and extend the format line to about 90. This will cover any really long addresses that you might type in. Hit **Execute** to save the changed format line. This format will be used for the envelopes, and the tab will determine how far over the address is printed on the envelope.

Next, you will need to add a format line for the body of the letter. Just hit **Insert Format** and a new format line will appear along with the message *change format.* Put tabs back in as needed (every 5 spaces is the normal default) and go over to the right margin and set it where you'd like (65 or 75 is normal depending on how small your printer's type is). Hit **Execute** twice and you're all set. Save the document as usual. When you begin to write a letter and are creating a new document, remember to specify **0001** as the prototype.

Once you've reached the editing screen for your new letter, attach the glossary (as instructed earlier). Hit **LF/GL a** (or whatever label you have chosen if not **a**. Enter each line of the address; as you are prompted, followed by **EXECUTE** -- not **RETURN**! Once you have entered the whole address, the program will take you down to the salutation and prompt you to enter the salutation. Type in the person's name, and again hit **EXECUTE**. That's it.

What the entry does

Entry a (Lines 1-23)

Lines 1 and 2 are comments. Any string that begins with **/*** and ends with ***/** is a comment. Comments should be used liberally so that you can easily figure out what you have done.

Lines 3 and 4 are the standard beginning of any glossary entry -- the label and the open curly-bracket.

Lines 6-17 are the input lines for the name and address. The **tab** on line 6 inserts a tab to move the address over on the envelope. **call prompt ("enter name")** puts a message in the upper right corner of the screen (in the "prompt" area) for the operator to type in the name. **call keysin return** on line 7 enters the data. The **keysin** command tells the Fortune:Word to read in all of the information that was entered from the keyboard until the **EXECUTE** key is hit. You shouldn't type a **RETURN** after the name, the **return** keyword at the end of Line 7 does that for you. Lines 8-17 just repeat this pattern for each line of a four line address.

Line 19 is a player-piano line. It does just what it says. It inserts a page break (between the envelope and letter) and then copies format line #2 (from your prototype document) into your letter. **execute** needs to be done twice, once for the insert and once for the change of format line. You would need to hit exactly the same keys if you did it manually.

Line 20 tells the program to branch off and execute another glossary entry -- in this case **entry z**.

Entry z (lines 23-49)

Lines 23-28 are the same format as lines 1-5 above.

Line 29 is an interesting line. **call display(false)** tells Fortune:Word not to bother displaying the changes until the entry is complete. This speeds up the glossary entry considerably. Once everything is done, the display is turned back on (line 44).

Line 30 inserts 10 returns at the top of the first page of the letter to bypass your name on the letterhead. Change 10 to another number if this is too much or too little.

Lines 31-33 goto "b" says to go to page b, which is the beginning of the document (in this case the page with the envelope address on it). **copy return(4) execute** tells the program to copy. In response to *Copy what,* the glossary enters four returns, which will copy each of the four lines of the address. The **execute** now brings on the new message, *To where.* **Goto "e"** says to go to the end of the document, which in this case is page two, and copies the name and address to the top of that page.

Lines 34-40 are needed to remove the tabs for the address on the letter that were used in formatting the address on the envelope.

Line 41 is another call to another glossary entry, in this case **entry D**. Entry D inserts the current date into the letter. Note that this time, Entry D will be executed, and then Entry z will continue on with line 42.

Lines 42-43 add 3 returns after the date and the word "Dear" for the salutation.

Lines 44-48. Line 44 is the opposite of Line 30. It turns the screen display back on, so that you can see where you are. the word "Dear" appears, along with the message prompt *nter salutation.* You type the person's name, followed by **EXECUTE**. In Line 46, keysin enters the name and adds a colon to the salutation. Line 48 drops down two lines, and you're ready to start your letter.

Lines 50-84 Entry D (This entry is from page 5-76 of the Fortune Advanced Glossary Use book)

Line 55 creates a variable called **today**. **today = date** automatically makes **today** equal to the system date. The unmodified system date is not very pretty. You can see what it looks like by hitting the **CMD** key (F13), followed by **!date**. The rest of Entry D jazzes up the date so that it looks normal for the letter.

See **Glossary Entry**, page 8

Software Index,

Cont'd from page 1

the price, the language the program is written in and whether the source code for the program is available. The kind of STAR listed for a product indicates the way it is distributed and how many references were provided to Fortune Systems. The star system goes from BLUE to GOLD to FIVE star, which indicates that the product is distributed directly by Fortune Systems.

COMMUNICATIONS PRODUCTS

IBM/BISYNCHRONOUS

3270 (BSC) Interactive Terminal Emulator
Fortune Systems Corporation, SUPER★, $995, C/n

3780 Data Communic. Terminal Emulation Sftwr
Fortune Systems Corporation, SUPER★, $995, C/n

HANDSHAKE II
SST Incorporated, GOLD★, $995, C/y

HANDSHAKE III
SST Incorporated, GOLD★, $850, C/n

MODEM/ASYNCHRONOUS/RS-232

Fortune-to-Fortune Copy
Fortune Systems Corporation, SUPER★, $395, C/n

HANDSHAKE -- C.O.L.T. (telex)
SST Incorporated, FIVE★, $750, C/n

HANDSHAKE -- I.T.E.
SST Incorporated, GOLD★, $295, C/n

Interactive Terminal Emulator Release 1.1.1.
Fortune Systems Corporation, SUPER★, $395, C/n

MicroezLNK
Advanced Micro Techniques, BLUE★, $150, Assembler/n

Modem Link
Uni-Komp, Inc., GOLD★, $45, shell script/y

PCworks
TouchStone Software Corporation, FIVE★, $195, C/n

SofGram (telex)
SofTest Inc., BLUE★, $750, C/n

Tango
Computerized Office Services, Inc., BLUE★, $295, /n

VT/E
P2/i, FIVE★, $350, C/n

Western Link
Uni-Komp, Inc., GOLD★, $45, /n

OFFICE AUTOMATION PRODUCTS

OFFICE AUTOMATION TOOLS

Business Cards
P2/i, BLUE★, $295, SMC BASIC/y

D.A.T.A. 3500 Word Processing System
TOM Software, BLUE★, $N.A., TOMBASIC/y

Document Conversion
Fortune Systems Corporation, SUPER★, $595, */n

EMACS Screen Editor
UniPress Software, Inc., BLUE★, $395, C/y

Extended Fortune:Word 2.0
Fortune Systems Corporation, SUPER★, $1495, C/n

In Basket
Guardian Automated Systems, BLUE★, $49.95, C/n

Status (Multitrieve)
CP International, Inc., FIVE★, $6000, FORTRAN/n

SurveySystem
P2/i, BLUE★, $1495, SMC BASIC/y

The Appointment Scheduler
Guardian Automated Systems, GOLD★, $250, C/n

MISCELLANEOUS

CRT Link
Uni-Komp, Inc., GOLD★, $45, /n

Records Processing Link
Uni-Komp, Inc., GOLD★, $295, SMC BASIC/y

PROFESSIONAL TOOLS

DATABASE/APPLICATIONS GENERATORS

APPGEN Application Generator
Software Express, Inc, FIVE★, $6000, C/y

APPGEN Query Language
Software Express, Inc, FIVE★, $700, C/y

Conetic Systems C Tools
Conetic Systems, Inc., FIVE★, $1995, C/n

C Database Management System (Cdb)
Jaybe Software, BLUE★, $10000, C/y

File-it!
Relational Database Systems, Inc., GOLD★, $495, C/?

IDOL
SMC Software Systems, FIVE★, $495, SMC BASIC/y

INFORMIX
Relational Database Systems, Inc., GOLD★, $1600, C/?

PROGRESS
Data Language Corporation, FIVE★, $2450, C/n

RUBIX
Infosystems Technology, Inc., GOLD★, $1495, C/n

Unicorn/DB
Guardian Automated Systems, FIVE★, $295, C/n

Unicorn/DB Toolkit
Guardian Automated Systems, BLUE★, $150, C/n

UNIFY
UNIFY, Inc., GOLD★, $1495, C/n

ENGINEERING, RESEARCH, SCIENTIFIC EDUCATION

KINGDOM
Seismic Micro-Technology, BLUE★, $3750, Fortran 77/n

GRAPHICS

AUTOGRAPH
Ficor, FIVE★, $595, SMC BASIC/y

Graphwriter
Graphic Communications, Inc, FIVE★, $495, ?/n

High Tech Business Graphics
High Tech Marketing, Inc., FIVE★, $595, C/n

MENU

Install Link
Uni-Komp, Inc., GOLD★, $95, shell script/y

Menu Link
Uni-Komp, Inc., GOLD★, $95, shell script/n

MISCELLANEOUS

BAS/IDOL BASIC to MP Link
Uni-Komp, Inc., BLUE★, $295, SMC BASIC/y

Calculation Link
Uni-Komp, Inc., GOLD★, $95, Bus. Basic/y

EZ-SPEED Records Management System
TOM Software, BLUE★, $N.A., TOMBASIC/y

Financial Link
Uni-Komp, Inc., BLUE★, $195, SMC BASIC/y

IDOL Documentation Link
Uni-Komp, Inc., BLUE★, $295, SMC BASIC/y

IDOL to Fortune:Word Interface
John Genter Associates, BLUE★, $395, SMC BASIC/y

Login/Postal
Operand, Inc., BLUE★, $229, C/n

Minitab Data Analysis Software
Minitab Inc., GOLD★, $750(m), FORTRAN/n

Periodical Filing System
P2/i, BLUE★, $295, SMC BASIC/y

Report Link
Uni-Komp, Inc., GOLD★, $45, SMC Basic/y

The DataView System
Bell Technologies, Inc., GOLD★, $345, C/n

PROJECT MANAGEMENT

Project Management Information System
TOM Software, BLUE★, $N.A., TOMBASIC/y

VUE
National Information systems, FIVE★, $2995, FORTRAN/?

SPREADSHEET

D-CALC Financial Analysis System
TOM Software, BLUE★, $N.A., TOMBASIC/y

MicroPROPHIT
Via Computer, Inc., GOLD★, $695, GW-Basic/n

Multiplan
Fortune Systems Corporation, SUPER★, $295, C/y

SYSTEM TOOLS

DEVELOPER'S TOOLS

Development Utilities
Fortune Systems Corporation, SUPER★, $495, C/n

Mirror and Duplicate
Guardian Automated Systems, BLUE★, $199.95, C/n

Programmer's Toolkit
Guardian Automated Systems, GOLD★, $150, C/n

Scream
McKay Systems, BLUE★, $400, C/y

SPEED1 Sftware Application Development Utility -
TOM Software, BLUE★, $N.A., TOMBASIC/y

Utilities
Operand, Inc., BLUE★, $99, C/n

EDITOR

EDIT/HEX
Hex 'FF' Inc., GOLD★, $99, SMC BASIC/n

The Bell Screen Editor
Bell Technologies, Inc., GOLD★, $245, C/y

LANGUAGE RELATED

APL PLUS R/UNX System
STSC, Inc., BLUE★, $1495, C/n

Business BASIC Interpreter
Fortune Systems Corporation, SUPER★, $295, */n

C Language
Fortune Systems Corporation, SUPER★, $795, C/n

C-ISAM
Relational Database Systems, Inc., GOLD★, $450, C/n

CBASIC/16
Digital Research, FIVE★, $595, C/?

FORTRAN-77
Fortune Systems Corporation, SUPER★, $795, C/n

FORTRIX-C+
Rapitech Systems Inc., FIVE★, $4200, C BASIC/n

FORTRIX-C+
Rapitech Systems Inc., BLUE★, $4200, C Basic/n

Micro Focus Level II COBOL Compiler&Run-time
Micro Focus, SUPER★, $1195, */n

Objective-C Compiler
Productivity Products International, BLUE★, $N.A., Objective C/?

Pascal Language Compiler
Fortune Systems Corporation, SUPER★, $795, C/n

Philon FAST/BASIC-C
Philon, Inc., FIVE★, $600, C/n

Philon FAST/BASIC-M
Philon, Inc., FIVE★, $600, C/n

Philon FAST/C
Philon, Inc., FIVE★, $950, C/n

Philon FAST/Cobol
Philon, Inc., BLUE★, $2200, C/n

RM/COBOL Version 2.0 Compiler
Fortune Systems Corporation, SUPER★, $1250, */n

SIBOL
Software Ireland, SUPER★, $795, C/?

TOMBASIC
TOM Software, BLUE★, $N.A., TOMBASIC/y

MENU

Q-Menu
Quadratron Systems, Inc., FIVE★, $395, C/n

MISCELLANEOUS

FOR:PRO 1.7.4.
Fortune Systems Corporation, SUPER★, $1495, C/n

MIMIX
TouchStone Software Corporation, FIVE★, $495, C ASM/n

VISUAL/menu
Computerized Office Services, Inc., BLUE★, $31495, C BASIC/y

PRINTER SOFTWARE

/usr/tools
e t p systems, inc., FIVE★, $1595, C/y

Business Basic - Spooler Interface V3.0
Hands Computer Systems, BLUE★, $395, C/n

Extended HP Printer Interface
Coast Business Systems, FIVE★, $395, C/n

Spooler 3.0
John Harris and Associates, GOLD★, $195, BASIC/y

Terminal/Printer Link
Uni-Komp, Inc., BLUE★, $195, UNIX Shell/y

AMUSEMENTS

Computer Baseball
Scarlotti Company, BLUE★, $250, FORTRAN 77/n

Software Company Index

This is list of companies whose products are listed in the software index on page 6.

Advanced Micro Techniques, 1291 E. Hillsdale Blvd, Suite 210, Foster City, CA 94404, **(415) 349-9336**

Bell Technologies, Inc., PO Box 8323, Fremont, CA 94537, **(415) 792-3646**

Coast Business Systems, 7700 Edgewater Drive, Suite 654, Oakland, CA 94621, ***(415) 593-9000**

Computerized Office Services, Inc., 313 North First Street, Ann Arbor, MI 48103, **(313) 665-8778**

Conetic Systems, Inc., 1800 S.W. First Avenue, Suite 180, Portland, CA 97201, ***(415) 593-9000**

CP International, Inc., 210 South Street, New York, NY 10002, ***(415) 593-9000**

Data Language Corporation, Five Andover Road, Billerica, MA 01821, ***(415) 593-9000**

Digital Research, 60 Garden Court, Monterey, CA 93942, ***(415) 593-9000**

e t p systems, inc., 10150 SW Nimbus, Suite E2, Portland, OR 97223, ***(415) 593-9000**

Ficor, 10200 Chester Road, Cincinnati, OH 45215, ***(415) 593-9000**

Fortune Systems Corporation, 300 Harbor Boulevard, Belmont, CA 94002, **(415) 593-9000**

Graphics Communications, Inc., 200 Fifth Avenue, Waltham, MA 02254, ***(415) 593-9000**

Guardian Automated Systems, 420 Main Street, Suite 600, Buffalo, NY 14202, ***(716) 842-6410**

Hands Computer Systems, 1593 Surrey Drive, Wheaton, IL 60187, **(312) 653-7360**

Hex 'FF' Inc., 2637 Centinela Avenue, #20, Suite 26, Santa Monica, CA 90405, **(213) 452-9165**

High Tech Marketing, Inc., 715 E. Cypress Avenue, Suite A, Burbank, CA 91501, ***(415) 593-9000**

Infosystems Technology, Inc., 6301 Ivy Lane, Suite 714, Greenbelt, MD 20770, **(301) 345-7800**

Jaybe Software, 2509 North Campbell, #259, Tucson, AZ 85719, **(602) 327-2299**

John Genter Associates, Box 67, Cressona, PA 17929, **(717) 385-0687**

John Harris and Associates, 2401 Sunset Boulevard, Houston, TX 77005, **(713) 520-0748**

McKay Systems, 699 A Strander Blvd, Seattle, WA 98188, **(206) 575-0172**

Micro Focus, 2465 E. Bayshore road, Suite 400, Palo Alto, CA 94303, **(415) 593-9000**

Minitab Inc., 215 Pond Laboratory, University Park, PA 16802, **(814) 865-1595**

National Information systems, 20370 Town Center Lane, Suite 130, Cupertino, CA 95014, ***(415) 593-9000**

Operand, Inc., 21 Knolltop Court, Novato, CA 94947, **415 892-7129**

P2/i, Suite 111, 8205 Spain Road, NE, Albuquerque, NM 87109, ***(505) 822-8585**

Philon, Inc., 641 Avenue of the Americas, New York, NY 10011, ***(415) 593-9000**

Productivity Products International, 27 Glen Road, Oxford, CT 06482, **(203) 426-1875**

Quadratron Systems, Inc., 15760 Ventura Blvd, Suite 1032, Encino, CA 91436, ***(415) 593-9000**

Rapitech Systems Inc., 565 Fifth Avenue, New York, NY 10017, **(212) 687-6255**

Relational Database Systems, Inc., Suite 600, 2471 E. Bayshore Road, Palo Alto, CA 94303, **(415) 424-1300**

Scarlotti Company, Box 23119, Baltimore, MD 21202, **(301) 594-1351**

Seismic Micro-Technology, 11111 Katy Freeway, Suite 200, Houston, TX 77079, **(713) 464-6188**

SMC Software Systems, 1011 Route 22, Bridgewater, NJ 08807, ***(415) 593-9000**

SofTest Inc., 555 Goffle Road, Ridgewood, NJ 07450, **(201) 447-3901**

Software Express, Inc, 2529 Briarpark Boulevard, Suite 700, Houston, TX 77042, ***(415) 593-9000**

Software Ireland, 1180 Westridge Drive, Portola Valley, CA 94025, **(415) 593-9000**

SST Incorporated, 9434 North 107th Street, Milwaukee, WI 53224, ***(414) 355-6990**

STSC, Inc., 2115 East Jefferson Street, Rockville, MD 20852, **(301) 984-5408**

TOM Software, PO box 66596, 127 SW 156th Street, Seattle, WA 98166, **(206) 246-7022**

TouchStone Software Corporation, 909 Electric Avenue, Suite 207, Seal Beach, CA 90740, ***(415) 593-9000**

Uni-Komp, Inc., 9803 Rocktree, Houston, TX 77040, **(713) 937-7782**

UNIFY, Inc., 4000 Kruse Way Place, Lake Oswego, OR 97034, **(503) 635-6265**

UniPress Software, Inc., 2025 Lincoln Highway, Suite 312, Edison, NJ 08817, **(201) 985-8000**

Via Computer, Inc., 7177 Construction Court, San Diego, CA 92121, **(303) 759-5344**

Return Your Surveys. . .

Glossary Entry,

Cont'd from page 5

Line 57 creates another variable called **month**. The **substr** command selects a piece of character string -- in this case it is taking from the fifth character through the seventh. If you look at the system date, you will see that these characters are an abbreviation for the current month.

Lines 58-69 substitute the full month name for the abbreviation. Each line is an **if** statement. If **month** equals the abbreviation given, then whatever is contained in the brackets is executed. For example, if **month == "Jan"** then **month** is reassigned to the word "January". Note that 2 equals signs are used when comparing two things, and 1 equals sign is used when we want to change the value of something. **jump makedate** tells the program to jump to another section, in this case **makedate** which begins on Line 71. This jump is not an essential part of the program, but it can save some time. If the month is January, there is no need to continue down the list of all the if statements for the rest of the year, so the program might just as well jump past them. If the month was December, then all of the if statements would be tested anyway, so the **jump makedate** wouldn't make any difference.

Line 73 sets the variable **day** equal to the numeric day of the month. If you look at the system date again, you'll see that the ninth and tenth characters are always the day of the month.

Line 75 works the same way, and sets **thisyear** equal to the year.

Line 77 puts a comma and a space after the date and before the year. The **cat** command is used to combine two things, in this case the comma and **thisyear**.

Lines 79-81 combine all of the pieces that have been created into one line called **currentdate**. The variable **currentdate** now contains the date in a normal format.

Line 83 takes **currentdate** and displays it above the salutation of the letter. When Entry D is completed, the program goes back up to Line 42. It returns to Line 42 because it was called from Line 41. Note that Entry D can be used by itself to insert the date into a document.

Josh Lobel

*Indicates a Five STAR vendor. In most cases, the phone number given is for Fortune Systems Corp, who distribute Five STAR programs.

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Stir It Up, Cont'd from page 3

The concept of "windows" has been around for awhile. However, as Fortune claims, there are few real competitors that have a windowing product with the same potential as Fortune:Windows. Fortune expects its windowing product to enjoy a competitive edge for the period of time until other software packages are release and/or widely accepted.

Other office productivity releases include an update to Fortune:Word (2.1.2)and an update to Multiplan (1.4.2). These updates let Fortune:Word and Multiplan work properly with Fortune:Windows. Also Fortune is releasing **RUBIX** which is a relational database management system. Finally, they have made available a printer interface for the **HP Laserjet** printer. This interface allows the Fortune to utilize all of the current capabilities of the Hewlett-Packard LaserJet printer and it incorporates proportional spacing and the ability to change fonts in a Fortune:Word document.

Graphics Products

Fortune Systems has released a number of products related to graphics. First is the Graphics coprocessor board which is designed to replace the current console board (Video Controller) and uses the standard console monitor for graphics display. The display resolution of the Coprocessor is 800 x 500. **Graphwriter** is a software product that produces quality business presentation graphics using information entered into the system through the keyboard or taken from a Multiplan symbolic file. It is designed to drive the Graphics Coprocessor board, the Fortune Graphics Workstation with either a Hercules or a Tecmar graphics board or plotters and printers. Fortune has also released a **Tektronix 401X Emulator** which works with the Graphics Coprocessor board to emulate any of the Tektronix 401X terminals. This Emulator is based on Fortune's ITE program and provides all the features that are available in ITE. The GSS software announced is a line of Graphics products from **Graphic Software Systems** which includes device drivers, C Bindings, the Plotting System, Plottalk and the Metafile Interpreter for UNIX. This particular software has been adopted by both IBM and AT&T and is in principle a flexible system that allows graphics software to drive virtually any graphics output device.

Five Star Software Products

Included in the Stir It Up presentation was the announcement of some vendors and products that were added to the Five Star List. These are as follows:

Autograph - FICOR has released a business graphics system which produces low resolution graphics that can be displayed on terminals, printers and plotters without the need for a Graphics Coprocessor.

Business Graphics - Another low resolution package released by HIGH TECH that will drive common terminals, printers and plotters.

BASIC Compilers - Philon Fast/Basic-M and Fast/Basic-C are true basic compilers that will speed up programs written in Basic.

Status-M - This is a text retrieval system produced by CP International.

APPGEN - Software Express produces this system that allows users to develop, install and modify applications without programming.

Bell Screen Editor - Known as "Screen" this is an updated version with many added features. Many owners of the Fortune may have an older version of screen already on their system.

GLOWS - Orion Software produces this system designed for the practicing accountant.

Construction Management and Accounting System - This system, marketed by PAC, is modular in construction and helps the contractor, builder or job shop automate accounting, control jobs, and control overhead.

VUE - A project management system designed by National Information Systems which uses critical path analysis to help plan and manage projects. They have some special prices in effect until the end of August, 1985.

TRAC LINE - A system which incorporates integrated accounting functions with a retailing module and a distributing module. More information can be received from TRAC LINE.

Mark Palmerino

Table 1: Cost per user

System Specs	PS20 1MB 1 Comm A 3 Users		XP45 2MB 2 Comm A 7 Users		SX70 2MB 3 Comm A 11 Users	
Price	Old 12,765	New 11,170	Old 28,040	New 21,740	Old N/A	New 30,720
Cost Per User	4,255	3,725	4,005	3,105	N/A	2,790

Table 2: New Price Samples

PS20 (512kb, console, multi-user 1.8)	$6,995
XP45 (512kb, console, multi-user 1.8)	$9,995
SX45 (1MB, multi-user 1.8)	$12,995
SX70 (1MB, multi-user 1.8)	$14,995
SX45T (same as SX45 plus 60MB tape)	$15,590
SX70T (same as SX70 plus 60MB tape)	$17,590
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512kb memory board	$1,595
1MB memory board	$2,995
4 port comm A	$595

Fortune Users:

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Newsletter for Users of the Fortune 32:16 Computer **October 1985/Volume 2 Number 5**

The BASIC Advisor

Ray Wannall is president of BaSiC Software Corporation in Baltimore and is contributing to this publication independently.

Question: I heard that Science Management Corporation (SMC) was sold! Is this true? If so, is this good or bad for us poor end-users?

Answer: Well, it's not exactly true, but it might as well be for all us poor end-users. SMC has sold its Proprietary Systems Division (otherwise known as PSD, which, by the way, is why all of your Business BASIC utility programs have PSD in their names). As I understand it, the sale was completed on Monday, September 30, at which time ownership of PSD and all of its proprietary software (including IDOL, BAS, and Thoroughbred) were transferred to Concept Omega, another New Jersey based company.

When I first snooped into this, I learned that Concept Omega is owned and operated by John L. Johnson, the original author of IDOL and BAS. Since I had always found SMC to be very much oriented to sales and money and not very oriented to technical support, my initial "vibes" were very positive.

I called John L. (as he used to be called) after some of the dust had settled and asked him what, if anything, he was planning to do differently. First and foremost, he said, Concept Omega was planning to strengthen the support program (hallelujah!) by involving more senior people in the support end of the business and eventually providing a toll-free number for users who wished to purchase technical support.

In addition, Concept Omega will be offering several new products for IDOL users. Among those available now are a new report generator called Concept R and BASIC Librarian, a full-screen editor for Business BASIC. . John L. told me that both of these can be used with the Fortune Systems computerI have a feeling you will be seeing some Concept Omega ads in /u/fortune news in the not too distant future.

Is all of this good news for end-users? At this time I would have to say yes. I just hope that Concept Omega lives up to its name and puts an end to the shifting PSD ownership.

Question: Someone told me that I cannot use a Televideo terminal with BAS. Is that true?

Answer: If anything, the Televideo terminal will have problems with your UNIX programs (Multiplan, Word Processing, etc. *ed. note: Televideo terminal will work with Multiplan, but at present not with the Menu system or Fortune:Word*) before it will have problems with BAS or other Business BASIC functions. I would suggest that before you buy a Televideo for a Fortune you request a demonstration on your system. If you only need it for BAS, however, you should be okay.

Question: I have been programming in Business BASIC for several years now, and I find it a very versatile language. Are there any commands available which are not in the Business BASIC guide?

Answer: Of course there are. Writers of documentation seem to share a talent for omitting little pieces of information here and there.

This first little goodie comes from an old and dusty Fortune

See **Basic Advisor**, page 7

Featured in this Issue. . .

The Glossary Entry

In our last issue, we described how to use Fortune:Word Glossaries. Hopefully some of you have had a chance to experiment with Dick Dow's letter program. You may find that even if the particlular glossary entry is not helpful for your application, examining the program may give you ideas for your own glossary entry.

The following letter is from Ruth McDonald who works at Fortune Systems. It explains more completely than we ever could have about attaching glossaries.

Dear Mr. Lobel,

I am the Software Test Engineer for Office Automation products at Fortune Systems. One of the products I test is Fortune:Word.

While reading your newsletter, Volume 2, Number Four, I found a couple of errors in your article regarding "The Glossary Entry". Part of my job involves reviewing user documentation, and verifying examples. I hope this information will be useful to you and your subscribers.

Under the section "Attaching a Glossary" you have stated that the easiest method of attaching a glossary is by pressing the F13 (COMMAND) LF/GL key.

This method can only be used while in edit mode. This method is good if you have forgotten to attach a glossary before editing a document, or you wish to temporarily use a different glossary. The only way to attach a glossary from edit mode is to use COMMAND LF/G.

This method is also very useful if you have added to, or changed a glossary entry using Fortune:Word Windows. (*ed. note: Fortune:Word Windows is part of the Advanced Features of Extended Fortune:Word or Fortune:Word 2.0*) As you know, when you edit a glossary from Fortune:Word Windows, the changes do not take effect until you leave the document you are editing, and verify the glossary document (shortcut code "vgl", edit the glossary, or use the Glossary Functions Menu).

See **Glossary Entry**, page 8

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Readers Arise

Are you itching to see your words in print? Do you have some valuable expertise or experience with the Fortune computer that you would like to share with others? Have you been dying to tell us about some misleading bit of information that was buried in a recent article? Well, now you can satisfy your deepest desires. **/u/fortune** *news* is now accepting written material from its readers.

You might want to write an article about some dimension of the Fortune computer that we haven't covered or about the latest, ticklish problem that you have devilishly solved. You might want to write a letter that comments on or criticizes an article that has appeared. Better yet, you might want to let us know that we left out the most important piece of information. Or, you might want to sit on your hands and watch other people make fools of themselves.

For the braver among you, who want to write full scale articles, please check with us about your magnum opus. Short letters or notes that either comment and critique or ask for information regarding a troublesome problem, need not be prededed by a telephone call to us. Any material that is submitted and published will properly identify and credit its author.

/u/fortune *news*. . .

Editor Josh Lobel
Associate Editors Benzion Chanowitz, Mark Palmerino, Mark Rhodes
Contributors Emily Schulman, Lori Rhodes

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The text for this newsletter was prepared using the **vi** editor and **Fortune:Word** on a FORTUNE 32:16 computer. It was then transferred using Kermit to a PDP 11/44 computer running UNIX and prepared for typesetting with the **troff** program.

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The UNIX Directory

Customizing Your Unix Environment

Automatic log on procedures

Each time you log onto your Fortune computer, the UNIX operating system sets up certain parameters that are used to guide and control your session at the computer. These parameters shape what is known as your operating "environment". By controlling these parameters you can customize your system and make it conform to your needs. One example of this is the ability to set up predefined windows with the new **Fortune:Windows** product. Other examples involve running certain commands each time you start to use the computer, such as who, mail, or everyone's favorite game -- blob.

When you log-in, the computer looks for certain files in your home directory (i.e., the directory that is usually identified by the account you are logging in on). If these files exist, the system uses them to set the parameters. If these files don't exist, then the system uses a default procedure for setting up these parameters. This month we will explore the uses of one of these files called "**.profile**" (pronounced *dot profile*) for the customization of your operating environment. As you log-in, the UNIX system is set to look for a file that is specifically named **.profile**. This is the case when your login procedure automatically leads you into either the MENU or the Bourne shell. (When your login procedure leads you into the C shell, the operating system looks for other files, called **.login** and **.cshrc**, in order to set up your operating environment. But we won't concern ourselves with that in this article.) All parameters of the operating environment are either defined in **.profile** or (if no such file exists) defined by default procedures. Parameters of the operating environment include such things as what your prompt string looks like and what directories are included in your path list. But, we are getting ahead of ourselves.

Customizing Your Search Path

Let's begin by examining what happens when you type a command to the system prompt. (Notice that we are assuming that you are using the UNIX shell, actually the Bourne Shell, and not the Fortune Menu.) Suppose you want to see who is currently using the computer. To do this you type the UNIX command **who**. When you type **who**, the computer finds the file **who**, checks to see if it is executable (i.e. checks to see if it is a program the computer can run - not all files are executable!) and then tries to run it. The program **who** is actually located in a special directory called /bin. Thus, the file's full name is /bin/who. You could type **/bin/who** to the prompt and you would see that the computer would respond with the appropriate information. Many other familiar UNIX commands can be found in the /bin directory like **date** and **ls**. So, when you type **date** the system goes to the /bin directory, finds the executable file named **date** and runs it. The **lpr** UNIX command is the command to print files on the printer; lpr stands for "line printer" and if you want to print out a file called "document" you simply type "lpr document" and the system searches for the executable file called "lpr" and starts it running. In this case, however, the system would not find **lpr** in the /bin directory. This is because **lpr** is found in the /usr/bin directory.

Now, how does the system know to look for commands like **who**, **date** and **ls** in the /bin directory while it knows to look for the command **lpr** in the /usr/bin directory? Well, one possible answer to that question is that the system does not know where these commands are but looks through every directory on the system until it finds an executable file with the name corresponding to the command that you typed in. This brute force method of finding a file is not acceptable, however, because it could take a long time to find a file. Rather, the system reduces the number of places to look for

Unix Directory,

Cont'd from page 2

a file. Essentially, the system keeps a list of valid directories to look in when trying to find a file to execute. This list is known as the "path".

Thus, when you type **who** the system takes a look at this path list of directories and knows where to begin looking for a file called **who**. One of the typical places to look for a file is in the /bin directory. Another typical place is in the /usr/bin directory. A third typical place to look is in your home directory. All of these directories might be specified in a path list.

It should be noted that this way of searching for commands can give rise to certain peculiarities and unintended consequences. For example, once I was playing around and created an executable shellscript in my home directory called **sh**. After I was finished I left it there and did not think about it until I started using Fortune:Word. I kept hanging up the system when I tried to print something out and was somewhat baffled. At first I thought there was some sort of bug with Fortune:Word but this possibility was ruled out when the word processer worked like a charm from someone else's account. Eventually I realized that the problem centered around that old **sh** file that I had in my home directory. Evidently, when Fortune:Word prints a document it creates a process which uses the UNIX **sh** program. However, when I started Fortune:Word from my account and tried to print something, UNIX began looking for a program called **sh**. Because of the way my path list is set up, it first began looking for **sh** in my home directory. Unfortunately, it was the wrong **sh** and my account was in limbo. Fortune:Word began working as I wanted after I deleted the **sh** file from my home directory.

To recapitulate, when we type a command to the system prompt the computer immediately begins looking through the system for that executable file. It doesn't look through the entire system but rather it searches through a "path" of preselected directories. When you log-in a default path is set up for you by the system. You can see what your path is set to by typing:

echo $PATH

If you do this you might see something like:

:/u/fred:/bin:/usr/bin:/etc:/usr/ucb

The colons separate the different directories in which commands will be searched. If we pull apart the above "path" we see there are five directories as follows

1) /u/fred
2) /bin
3) /usr/bin
4) /etc
5) /usr/ucb

In reality there are actually six directories in the search path. The first is always the directory you are working in. Thus, if you are working in some other directory than your home directory, the path variable specifies that when you issue a command it will look for the executable file in your present working directory first and then proceed through the rest of the directories specified (i.e. /u/fred, then /bin, then /usr/bin, and so on). Let's say your username is fred and you are currently working in the directory /u/mary. You get curious and want to see who is on the system so you type the command **who**. When you do this the computer looks in your current directory, which is /u/mary, for the file **who** and doesn't find it. The system then looks in /u/fred, your home directory which is the second element in your path, and doesn't find it there either. The system then looks in /bin, the third directory in the path list, and does find it and, of course, runs it. If the command is not a file on any of the directories specified by the path list, then your command will not be executed. If this is the case, the system will respond with "command not found". This does not necessarily mean that the command is not in your computer, just that it couldn't be found. When you see this error message and you are sure the command is on the system you should determine first whether or not you misspelled the command. If you haven't misspelled the command then the problem probably involves your path list.

As pointed out above, when you log-in the computer sets up a default path list. This is an automatic part of the Bourne shell (or the MENU, as the case may be). The default path list is shorter than the example given above. In fact, if you have not modified your path list and you do a "echo $PATH" you would probably see "/bin:/usr/bin" as your path. However, this list can be modified to include other directories. This customization is what we discuss next.

Suppose you have some special programs that you access much of the time (e.g. special accounting programs or perhaps some games you play once in awhile) and you want to be able to simply type their names to the prompt. Let's be even more concrete. Suppose you are a blob fanatic and love to play this game every spare chance you have. (If you don't know what blob is and would like more information about this game and other fun games and even some useful programs, write for our D.C. Grab Bag diskette. See Notice elsewhere in this newsletter). Further, let's say you have blob in a directory called /usr/games. If this directory is part of your path then you can simply type **blob** to your prompt and away you go.

Chances are, however, that /usr/games is not part of your path (i.e. it is not part of the default path list you get when you log-in). Therefore, if you want to play blob you must type the following cumbersome line:

/usr/games/blob

Typing in **/usr/games/blob** can be very tedious and prone to errors so it would be much more convenient to be able to type **blob**. You can do just that if you modify your path list so that it includes the /usr/games directory. If you want to make the directory /usr/games part of your path you can type:

PATH=$PATH:/usr/games

which will reset the path variable to include all the directories it had before plus the directory /usr/games.

Unfortunately, the computer forgets this new path list when you log-off. So, the next time you log-in, the old default list is reinstituted and you either have to type **/usr/games/blob** to run blob or you have to type the above **PATH=$PATH:/usr/games** command again. We think you will agree that either option can become quite tiresome after awhile. In fact, if you think it is tiresome enough you may even lose your lust for blob which would be a sad state of affairs indeed. Don't despair, however, because there is a nice way out of this conundrum.

Remember at the beginning of this article we said that when you log-in the system sets up certain parameters. One of these parameters is this path list. We also said that, when you log-in, the system looks in your home directory for certain files and if they exist the system uses them to set some of the parameters. Thus, one way out of the above conundrum is to use a file in your home directory to automatically set the path list so that it includes the directory /usr/games.

The file we are talking about is the file called **.profile**. If you want to automate the setting of your path list to include the

Unix Directory,

Cont'd from page 3

/usr/games directory, then you can use an editor and create a file called **.profile** in your home directory. You should put the following line into it:

PATH=$PATH:/usr/games

If you have a file called .profile in your directory and it contains the above command then the system will modify its normal default path list that it gives you every time you log-in. The new path list will be the one you have specified in the .profile file.

We have modified our path variable to include a directory called /usr/cmd. This is where we keep our own customized shell scripts. By putting our commands here, we don't clutter up /bin and we are able to easily back up all of our own commands.

Running Commands Automatically

Thus far, this article has indirectly introduced the .profile file to you. The .profile file is a file which can contain any number of commands that are executed each time you log-in. Using it to set your path list is only one of many hundreds of things you can do with it.

For example, in addition to using it to set your path you can use it to automatically run certain programs when you log-in. Suppose you had a file called **.profile** in your directory that had the following lines in it:

```
PATH=$PATH:/usr/games:/usr/cmd
date
who
df
```

(Note: "$PATH" refers to the current setting of PATH. By including it in this program line, we are saying let the new PATH equal the old PATH **plus** the new directories **/usr/games** and **/usr/cmd**) This **.profile** would not only set your path to include the /usr/games and /usr/cmd directories each time you logged in. It would also automatically run the program **date** which would give you the current date and time, run **who** which would tell you who else was using the system currently, and finally run **df** which is a command that tells you how much space was being used on your disk. The handy thing about this is that you would get all of this information each time you logged in without having to worry about the tedious task of typing each command.

One useful command to include in the **.profile** is the **bye** command. **bye** logs the user off the computer. We use it for users who will use a database, and as soon as they cancel out of the database, we want them to be logged off of the computer. You might have someone who just wanted to use **Multiplan**. Their **.profile** might look like this:

```
df
date
who
mp68
bye
```

Thus, there are two basic purposes to using the **.profile** file. First, you can put commands into that file so that they will run automatically each time you log-in. In the example above, these would be commands like **who** and **date**. The second purpose is to set certain "shell variables" so that you can customize your operating environment. The discussion revolving around the path variable was an example of this.

Customizing Your UNIX Prompt

There are other "shell variables" that can be set. For example, the shell variable PS1 contains the "prompt string". This is the prompt that the computer gives you when it is ready for you to type a command. The default for the prompt string is "$". If a "$" is too ordinary you might reset it to something a little more exotic by putting the following line in your **.profile**:

```
PS1="What do you want, dear? "
or
PS1="Fred's Fantastic Computer: "
or
PS1="Hi handsome! "
```

Actually there are some good reasons for utilizing this flexibility. Perhaps you use more than one computer or you often use more than one account on a single computer. One way of constantly reminding yourself of where you are is to modify the prompt string so that it is different for each computer or account.

Creating Your Own Names for Commands

Another possible use of shell variables is to make a rudimentary "aliasing" mechanism. An alias, in UNIX parlance, is an abbreviated form of a longer command. For example, an alias for **ls -sail** might be **lls** which could stand for **long ls**. To set up this alias you could add the following line to your **.profile**:

```
lls="ls -sail"
```

When you want to execute this command you would type **$lls** to the prompt and that command would be performed. (The "$" in **$lls** is part of the command and is not the prompt.) One other use of this alias mechanism might be to change to a directory with a very long name, and perhaps even execute a program. Let's say you have your **Multiplan** files in /u/john/mpfiles. If you include the following line in your profile

```
gomp="cd /u/john/mpfiles"
```

all you would need to do is type $mpex to switch to /u/john/mpfiles.

The commands that have been discussed in this article have all assumed you were using the Bourne shell. If you are using the C-shell then certain commands would be different. Of more importance is the fact that the C-shell does not read the **.profile** file but rather looks at two files called **.login** and **.cshrc**. Thus, if you are using the C-shell you should put the commands that you want automatically executed upon log-in in the **.login** file.

Mark Palmerino

Announcements

Fortune Systems Corp's upgrade offer from basic Fortune:Word to the Full Extended version of Fortune:Word 2.0 has been extended. We had announced that the opportunity to upgrade for $595 would expire this summer. Because of the success of the program, Fortune has removed an ending date for the offer. If you would like the power of the spelling checker, the Advanced Glossary capabilities discussed in The Glossary Entry, etc., contact your dealer.

UNIX Book Review

Introducing the UNIX System, by Henry McGilton

With UNIX becoming a very widely used operating system, there has been a proliferation of books which deal with the fundamentals of UNIX. We have seen and used a number of these books and have found that they have become an indispensible part of our reference material ("What was the name of that command that counts the number of works in a file", or "What is the syntax for the sort command?").

The benefits of these books are essentially threefold. First, they provide the interested individual with an appropriate introduction to an operating system that is sometimes a bit opaque. This can be a difficult task for any book because it often must explain both UNIX and the many fundamentals of working with any computer (e.g. loggin on the computer, the idea of files and file structures, what an editor is and what it is good for, etc.).

Second, as mentioned above, they can often be used as a resource. Many UNIX commands are very flexible but this flexibility means that some commands are difficult to use - or are, at least, difficult to remember how to use. Granted, there are "manual" pages (the UNIX documentation on how to use a program) but these descriptions were written in order to be a quick reminder to someone who has used a particular command or UNIX system quite extensively (in fact, some "How to" books on UNIX actually devote a section on how to read and utilize these "manual" pages). For the beginning to moderately skilled UNIX enthusiast, these manual pages can sometimes be less than helpful. A good UNIX book, then, often provides a more tutorial-oriented approach to those commands that are frequently used.

Third, these books, depending on the targeted audience, may explain topics that are not appropriate for the beginner but would be useful for someone who is past the beginning stages. That is, as we use the computer more, and struggle with it, we learn more. As we learn more, our capacity for learning increases and topics that might have seemed absolutely incomprehensible at one point in time now become something that would enhance our use of the computer.

In this column, we are reviewing a book entitled "Introducing the UNIX System" which is written by Henry McGilton and Rachel Morgan (1983, McGraw-Hill). We've chosen to review this book because we feel it is one of the better books on UNIX that we've come across. In general, it is well written. However, the book has certain strengths and weaknesses that are worth noting. We begin by listing the chapter titles:

1. Introduction
2. Getting Started on the UNIX System
3. Directories and Files
4. Commands and Standard Files
5. User to User Communication
6. Text Manipulation
7. The ed and sed Editors
8. The ex and vi Editors
9. Formatting Documents
10. More Formatting Tools
11. Programming the UNIX Shell
12. Tools for Software Development
13. The UNIX System at Berkeley
14. UNIX System Management Guide

Weaknesses

In our opinion, this is not the book you would want to use if you have never used a UNIX system before. The book is over 500 pages long but of this just a little over 20% is directly useful for someone who has just sat down in front of a Fortune computer for the first time. In all fairness, chapters 2, 3 and 4 are useful to the beginner and are sufficient to get one logged on the computer and using some of the basic UNIX commands quickly. However, there are other books we've seen which are better suited to guiding the novice user through the fundamentals of UNIX. In future issues we will review some of these books.

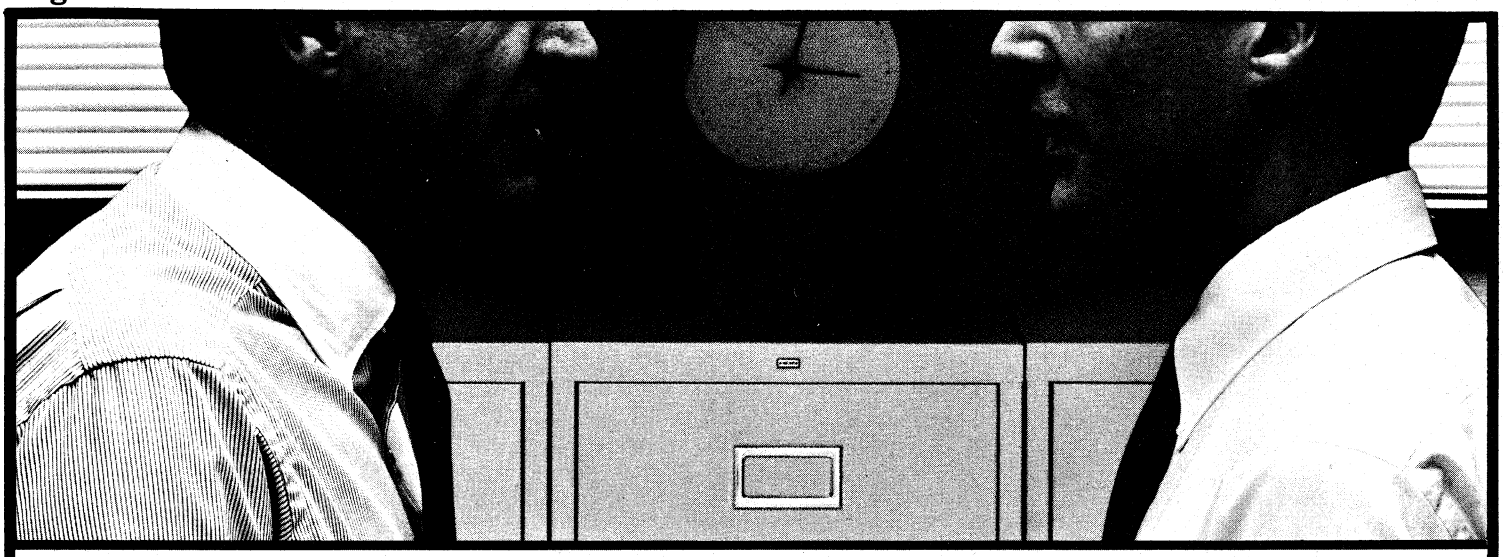
Strengths

The strengths of this book come mainly from its focus on the topics that are useful to someone who has spent some time with their Fortune and who is interested in becoming acquainted with areas that will increase their understanding of UNIX. There are two general areas of importance: Text formatting and System management.

Text Formatting

One of the initial uses of the UNIX system at Bell Laboratories was for the production of text documents. As a result, UNIX contains a vast array of programs, tools and utilities designed to aid in the production of these documents. This is reflected in the organization of the book which devotes 230 pages to explaining editors and text formatting tools. This may or may not be useful for you since Fortune:Word, especially as it is upgraded, can perform almost all of the functions described in this book. If you are one of the people who bought the Fortune because it was a UNIX machine and you were looking for the text formatting capabilities that you found in other UNIX environments, then this book's treatment of these topics may interest you. We should mention also that one chapter deals with the "ed" editor which is the standard UNIX and is found on almost every UNIX computer (including the Fortune). No doubt you've run across this editor before and maybe have had to use it. It can be tedious editor but all in all it is powerful and under certain circumstances it is the best editor to use. Thus, this chapter may be helpful.

See **UNIX Review**, page 10



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Basic Advisor,

Cont'd from page 1

Systems technical tip and should provide you with hours of entertainment. It involves the used of the 'ES' mnemonic which, in the Business BASIC guide, is explained as "Precedes an escape sequence" (whatever that means). You can have characters appear on your screen as blinking, underlined, or in reverse video using the following commands:

In order to:	Use the command:
Begin Blink	'ES',$4E$
End Blink	'ES',$5E$
Begin Underline	'ES',59
End Underline	'ES',$5A$
Begin Reverse Video	'ES',48
End Reverse Video	'ES',49

For example, the following command will cause the message "PRINTING" to appear blinking in reverse video:

```
PRINT
@(0,22),'CL','ES',$48$,'ES',$4E$,"PRINTING",'ES',$49$,'ES',$5E$
```

Also, I was playing around with my Okidata 84 and discovered (quite by accident) that I could print horizontally expanded characters by placing CHR(31) before the print line and CHR(30) after. I don't know if this works with other brands of printers, but it may be fun to fool with. Here's an example: assuming that channel 7 is opened to "LP", the following command causes my printer to print "LAKESIDE SPORTING GOODS" in horizontally expanded characters:

```
PRINT (7) CHR(31), "LAKESIDE SPORTING GOODS", CHR(30)
```

The main problem I have encountered with this is that the @ (at) command becomes confused.

Finally, if you wish to examine and play with other undocumented BASIC commands, I suggest you print hard copies of the **PSD utility programs. There you will find commands such as RENAME whch do not appear in the Business BASIC guide.

Question: I'm sick of trying to make BAS work for me! I bought three applications several years ago, and I can't seem to make it work without errors (after two separate tries). Isn't there any other accounting system on the market that runs under Business BASIC? I don't want to buy a new language.

Answer: While there are several business accounting systems running in Business BASIC, I have not seen one that is as tested in the marketplace. Many are very specialized, and most have more "bugs" in them than BAS. You must remember that both hardware and software are working their way down from the large mainframe systems of yore, hardware at a more rapid pace. Software companies are busy translating their products to the smaller business systems, and this leaves less time for new development. Therefore, what we small business people get is a selection from many established multi-company, multi-functional accounting packages, and this is usually much more than we want or need. I would suggest that you try to make do with BAS for the time being, using a support service at this time, and keep an eye on ads for new software on the market that is geared to smaller businesses.

For Sale

Fortune 32:16 with 512K RAM, 10 meg hard disk. 1½ years old. Single user For:Pro 1.7, Fortune:Word, Multiplan, Fortune ITE, Rixon 300/1200 Hayes compatible modem, Mannisman Talley 160 cps printer. Cal Dan Herron, 317 267-6802

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Fortune 32:16 computer, Prism 132 printer, sheet feeder, cables, Conetics, A/R program, Extended Fortune:Word. 1 year old. $16,000. Call 808 242-6847 (Hawaii).

Fortune 32:16 with 756K RAM, 10 meg disk, 2 yrs old. Extended Fortune:Word, Spelling checker, Informix, Multiplan, Pascal, Business Basic, C, Development Utilities, ITE, 4-port Comm A, Hayes Smartmodem. Best offer. Call Rick Rumphrey, 408 980-4767.

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Amendment

In Volume 2 number 4 of the newsletter it was stated that the STATUS program from CP International was priced at $6,000. The price has been lowered -- it is now $2,995. STATUS is an indexed text retrieval system.

Glossary Entry,

Cont'd from page 1

A useful way around this is to bring a glossary up in a Fortune:Word window, make the changes, or add new text, then close the window. Now, you need to verify the glossary. How? Use the COMMAND i or I command to display the Document Listing menu. Place the cursor on the glossary name and press the GO TO PAGE key. Now, press CANCEL, then EXECUTE. The glossary is now being verified. Press CANCEL when the Document Listing is displayed. You are back in your document. The glossary is verified but the glossary that existed before these changes is what is attached, so you need to re-attach the glossary. Press COMMAND and LF/GL and enter the same glossary name. The new or changed entries will be immediately available.

If you have attached a glossary using the COMMAND LF/GL method, when you leave the Fortune:Word document that glossary is automatically detached. If you use "by example" you must verify that glossary before you can call back the entries after you have left the document.

If you had attached another glossary, from the Menu system, that glossary would be re-attached until you leave Fortune:Word.

Another method of attaching a glossary is by editing the glossary. Anytime you edit a glossary document as soon as you exit the glossary, with the exception of editing while in Fortune:Word Windows, the glossary is automatically attached. If you have a glossary attached before entering a Fortune:Word document, the glossary with the new "glossary by example" entries are automatically verified and attached.

If a glossary is attached from any menu (not from within a Fortune:Word document) the glossary will remain attached until you leave Fortune:Word, attach another glossary, or use the detach glossary function.

Another method, which I myself use most often, attaches the glossary from the Document Listing menu (Index). You can use shortcut codes to view the Document Listing (ixs or ixl), place the cursor on the name of the glossary you wish (two asterisks displayed in front of a glossary document), and press the LF/GL key. The system prompts "glossary attached". This also remains in effect until you leave Fortune:Word, attach another glossary, or use the detach glossary function.

The only time that this method cannot be used is from edit mode. If you press COMMAND i or I, to get the Document Listing menu, pressing COMMAND LF/GL has no effect.

Note: In all current versions of Fortune:Word the system still prompts "glossary attached". This is a bug. The glossary is not attached. This will be remedied in the 3.0 version.

Under the section "Getting Started", last sentence on page 2 to the top of page 4, "it doesn't matter whether they're upper or lower case, they should be one or the other:..." FALSE. Let me explain the way the system interprets keywords in a glossary.

A keyword typed in lower case is the same as pressing the key. The keyword "return" is interpreted as a carriage return. If you entered "RETURN" the system interprets the keyword as "SHIFT" and "return". At this time there is no function for <SHIFT/RETURN> but with other keys this can be a disaster.

Let's take for example Global Search and Replace. To activate Global Search and Replace you would hold down the <SHIFT> key and press the <REPLACE> key. To enter the keyword for this example you would type REPLACE (SHIFT plus REPLACE), if you just wanted to use the replace function the keyword would be "replace". The same aplies to the following:

UNSHIFTED KEYS

	Keyword	**Function**
<HELP>	help	Initiates Fortune:Word Help Menu.
<PAGE>	page	Inserts an optional page break or optional column break if using a multiple column format
<MERGE>	merge	Inserts an opening merge symbol (<)
<SEARCH>	search	Starts search from your current location
<REPLACE>	replace	Initiates the replace function
<COPY>	copy	Initiates the copy function
<MOVE>	move	Initiates the move function
<CURSOR>	up	Moves the cursor up one line, you may also use the keyword "north"
<CURSOR>	down	Moves the cursor down one line, you may also use the keyword "south"
<CURSOR>	right	Moves the cursor right one line, you may also use the keyword "east"
<CURSOR>	left	Moves the cursor left one line, you may also use the keyword "west"
<F13>	subscript	Inserts the subscript symbol (a down arrow) which instructs the printer to print text 1/4 of an inch below other text on the line.

SHIFTED KEYS

	Keyword	Function
<SHIFT/ HELP>	HELP	If you have Fortune:Windows on your system this would initiate the Fortune: Windows Main Menu, otherwise it initiates Fortune:Word Help Menu.
<SHIFT/ PAGE>	PAGE	Inserts required page break or required column break if using a multiple column format.
<SHIFT/ MERGE>	MERGE	Inserts an closing merge symbol (>)
<SHIFT/ SEARCH>	SEARCH	Starts search from top of document
<SHIFT/ REPLACE>	REPLACE	Initiates the Global Search and Replace function.
<SHIFT/ COPY>	COPY	Initiates Supercopy, or copy between documents
<SHIFT/ MOVE>	MOVE	Initiates the Supermove, or move between documents.
<SHIFT/ CURSOR>	UP	Moves the cursor left (backwards) according to setting for Cursor Mode (word, sentence, paragraph, or page), you may also use the keyword "NORTH"
CURSOR>	DOWN	Moves the cursor right (forward) according to setting for Cursor Mode (word, sentence, paragraph, or page), you may also use the keyword "SOUTH"
	RIGHT	Same as lowercase "right"
	LEFT	Same as lowercase "left"
<SHIFT/ F13>	SUPER SCRIPT	Inserts the superscript symbol (an up arrow) which instructs the printer to text on the line.

So, as you can see it does matter if the keywords are upper or lower case.

Dick Dow's glossary entry is quite useful but there is an error with the entry "D" which is listed in Fortune:Word's Advanced Glossary manual, page 5-76. The glossary entry does not take into account if the "day" has 1 or 2 characters. Day 1 thru 9 is incorrect, and days 10 thru 31 are correct.

I have enclosed my jazzed up "date" entry which does take "day" into consideration. As you will see the entry is also shorter since I have combined some of the steps. Also, notice that I do not have a space after the months in { month = "month"..}.

```
entry A
{
today = date
month = substr(today,5,7)
        if (month == "Jan") { month = "January"jump makedate }
        if (month == "Feb") { month = "February"jump makedate }
        if (month == "Mar") { month = "March"jump makedate }
        if (month == "Apr") { month = "April"jump makedate }
        if (month == "May") { month = "May"jump makedate }
        if (month == "Jun") { month = "June"jump makedate }
        if (month == "Jul") { month = "July"jump makedate }
        if (month == "Aug") { month = "August"jump makedate }
        if (month == "Sep") { month = "September"jump makedate }
        if (month == "Oct") { month = "October"jump makedate }
        if (month == "Nov") { month = "November"jump makedate }
        if (month == "Dec") { month = "December"jump makedate }
[makedate]
day = substr(today,9,10)
        if (day >= 10) { day = cat(" ",day) jump finish }
[finish]
year = substr(today,20)
newdate = cat(month,cat(day,cat(",",year)))
call feed(newdate) return
}
```

You have suggested that a user should use a different prototype document when creating letters if they are going to use this glossary entry. You can also change the format line in Dick's glossary entry. I have enclosed a glossary entry that can be added to Dick's glossary or used separately.

```
entry B
{
insert          /*Allows you to insert a new format line*/
format          /*Inserts a new format line*/
goto left       /*Moves you to 1st character of format line, no matter
                  where you are when you enter the format line.*/
space(47)       /*Removes all the tab markers up to position 48*/
tab             /*Inserts a tab stop in the format line*/
space(41)       /*Removes all the tab markers up to position 90*/
return          /*Sets your right margin at 90*/
execute(2)      /*1st <EXECUTE> sets the format line, 2nd
                <EXECUTE> finishes the insert.*/
}
```

To use entry B rather than a different prototype document in Dick's glossary entry change the following:

insert at beginning of entry a:

```
"entry a"
{
    call B          This will call the regular format
                    next line: "tab call prompt ("enter name")"
                    etc..
```

change this line:

```
    "insert PAGE copy format "2" execute execute"
```

replace line with:

```
    insert PAGE copy format "1" execute(2)
```

continue with the rest of entry a

I hope that this will be of some use to you. If I can help in the future please let me know.

Sincerely,

Ruth McDonald
Applications Test Engineer
Fortune Systems Corporation

(Editor's Note: We appreciate this letter from Ms. McDonald. The idea of incorporating the new format line within the glossary document is an intriguing one that should work well for many users. One advantage of Dick Dow's approach of using a special prototype document is that the heading and footing pages as well as print format instructions can be stored in the prototype document. We'll have more about using prototype documents in a coming issue. If you're in a rush, there's a good section on them in the Fortune:Word users' manual.)

FREE SOFTWARE

We have added a new disk to our library of programs that run on Fortune computers. As we have announced in past newsletters, these programs are either in the public domain or are copywritten, but are currently available for distribution free of charge.

The new "Compressor's Delight" diskette has several useful utility programs along with many games. Two of the highlights are the programs **compress** and **grep**. Compress is a program that shrinks files from 25-90% of their original size. It is very useful for making more room on your disk by shrinking inactive files. It is also an efficient way to transfer files via modem. Grep is what is called a pattern-matching program. It is used to search through files for occurences of a specified word or words. If you know that some of your files refer to "Dr. Green", you can have **grep** list the files that include Dr. Green. It's helpful for jogging your memory. Also included is a neat program called **dtree**, which lists out the tree structure of your directory tree.

The games on this disk include cribbage, craps, hack, several banner programs and a new big clock program.

The other three disks in our library are also available. They are: "D.C. Grab Bag", including kermit, "Fortune Utilities", including several editors, and "Fortune:Word Tutorial", which is a demonstration lesson with accompanying Fortune:Word sample files.

Beginning on November 1st, we are changing our policy and pricing on these floppies. From now on, it will not be necessary to send us your floppy. We will provide the programs on our floppies. Our fee will now be $10.00 per disk, which includes the cost of the disk and mailing. We hope that this system will allows us to process your requests more quickly. If you are interested in any of these disks, please make your check payable to **The Cambridge Consortium, Inc.** and mail it to the address given on Page 2. Please note that the charge is $10 for each disk, which covers our expenses.

IMPORTANT Hard Disk Preventive Maintenance

Our hard disk crashed recently, and it turned out that the cause of the problem was that the configuration block had gotten scrambled. We knew we had a problem when we got a message that said "Drive 0 has gone bad, will not accept any more requests". The configuration block is located right at the head of the disk and it contains crucial information about the way the disk is formatted, which blocks aren't good, how much swap space you have, etc. Without it, the disk can't work. Fortunately, it is possible to recreate a configuration block -- if you know what information it contained. There is a simple way to make a record of this, and we strongly encourage everyone to do it. All you have to do is turn on your printer, get into UNIX (!sh from the Global Menu), and type the following:

rdconf /dev/hd00 | lpr RETURN (vertical bar is on the middle grey key on left side of the keyboard).

This will start your printer going. If you have more than one disk, use the same command but change hd00 to hd10 hd20, etc. This is what the printout should look like:

```
Configuration block for: /dev/hd00
System ID: 0
Format time: Tue Jul  3 13:01:31 1984
Modify time: Tue Jul  3 13:02:19 1984
Media type: Hard
Sectors/track: 17
Number of heads: 8
Number of cylinders: 320
Write reduce: 132
Write precomp: 132
Drive attributes: 0
Block size: 512
Software interlace: 1
Hardware interlace: 2
System interlace: 3
Disk identification: "C20 - 20 Mega byte"
  Partition 0 begins at 0, 272 in length
  Partition 1 begins at 272, 6528 in length
  Partition 2 begins at 6800, 36720 in length
0 begins at 68, 82 in length
Number of bad blocks: 46
Diagnostic spares:     15-16 32-33
Used spares: 0(560) 1(568) 2(570) 3(38080) 4(38081) 5(38082)
             6(38083) 7(38084) 8(38085) 9(38086) 14(1845)
```

If you have an expansion cabinet, it is probably worthwhile to print out one other file as well. Type:

lpr /etc/fstab RETURN.

This file contains other information about how the system is using your disks.

Store these printouts in a safe place -- they could save you a lot of time and money in the future.

Book Review, Cont'd from page 5

System Management

It is rare to find a chapter in a UNIX book that deals with the issues surrounding the management of the system. Most books teach users how to log onto the computer and use many of the commands that a "user" is likely to need. However, if you own a Fortune or are responsible for it, then you need to know much more than this. This chapter introduces a number of programs that are useful to the system manager. For example, it discusses how to set up accounts and groups, how to make a file system, how to mount file systems and using the program that checks file consistency (fsck). Naturally, no author can delve into all the details of these issues in one chapter but there is much useful information here. In addition, there are chapters on programming in the shell (writing shell scripts), tools for software development and an explanation of some Berkeley programs (like the C Shell).

Mark Palmerino

Buying UNIX Books

If you have a large book store or university near you, UNIX books will probably be readily available. If you can't find the books you want, there are several book stores that specialize in UNIX books. Here are two:

The Independent UNIX Bookstore, 520 Waller Street, San Francisco, CA 94117, **415 621-6415**

The Cucumber Bookshop, Inc., 5611 Kraft Drive, Rockville, MD 20852, **301 881-2722**

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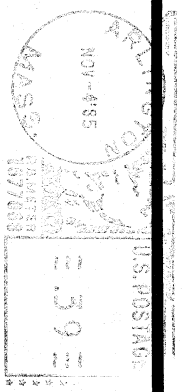

/u/fortune* *news*. . .

Newsletter for Users of the Fortune 32:16 Computer **November 1985/Volume 2 Number 6**

Looking at Fortune:Windows

For the past several months, we have been using the new **Fortune:Windows** product on our computer. This article summarizes some of our impressions of one of Fortune's newest products.

Fortune:Windows is a very powerful product. When you use **Fortune:Windows**, you'll feel like you have several terminals within easy reach, each running a separate application. We have thoroughly enjoyed using it. Given these feelings, we should clarify something from the outset -- **Fortune:Windows** was never designed to make your Fortune a Macintosh. Although it features a popup menu that is reminiscent of the Mac or of Borland's Sidekick, it does not have the sexy graphics capabilities that a Mac has. You can't drag window borders around on the screen and play with icons, but once you eliminate those preconceptions from your mind, you will see that **Fortune:Windows** has much to offer. Fortune says that their intention in creating **Fortune:Windows** was to create a tool that would provide a business solution for people who want their computers to mimic their own behavior and do more than one thing at once. In addition, they wanted to create a product that would compliment their existing hardware and software rather than create an entirely new product.

Fortune:Windows provides several important features. The two most valuable are: 1) The ability to run two or more separate applications on one terminal concurrently and easily switch back and forth from one to the other and 2) The ability to move data easily from one application to another, e.g. from **Multiplan** to **Fortune:Word**. We will talk more about these features in a moment. In addition to these two features, **Fortune:Windows** sports the following:

Screen Layout

- Interfaces through popup menu system
- Opens up to eight simultaneous windows per terminal
- Creates window shapes using any of seven defaults or your own custom size
- Displays multiple, overlapping windows on a single screen
- Names windows for easy reference
- Moves windows to new locations on screen
- Increases viewing area of window to full screen and returns it to original size

Integrate Information

- Transfers displayed information from one window/application to another
- Inserts a complete file into a window/application
- Saves a screen image of information displayed in a single window to a file for future use.
- Saves a complete image of the terminal screen which captures information from all applications displayed in multiple windows to a file for future use.

See **Windows**, page 6

Featured in this Issue. . .

Electronic Bulletin Board Arrives

The long anticipated Electronic Bulletin Board has finally been set up. The Cambridge Consortium, Inc., publishers of **/u/fortune** *news*, has created the board with the hopes that it can be a central information exchange point for Fortune users around the country.

What is an Electronic Bulletin Board

The bulletin board is a program that runs on our Fortune computer in the Boston area. Users can call this computer using a modem and communications program. Once you log onto the system, you will have access to information that has been entered by us, as well as questions, comments, requests, etc. that have been left by other Fortune users. In a sense, the bulletin board can become a repository for Fortune knowledge. This might include technical tips on hardware, instructions for hooking up unsupported printers, news on new software releases, etc.

In addition to information, it is also possible to trade software using the system. All of the programs that are on our floppy disks can be downloaded electronically to your system. If you have programs that you think others would be interested in, they can be uploaded to the system. This includes things like Multiplan templates or Fortune:Word glossaries. Once they are added to our system, other users can easily get them onto their own computers. Obviously software that is copyrighted and protected in order from free distribution would not be distributed in this manner.

Finally, the bulletin board program lets users send electronic mail to each other.

In short, the bulletin board is a method for Fortune users to talk to each other. This will undoubtedly be a great resource for all who use it.

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/u/fortune *news. . .*

Editor Josh Lobel
Associate Editors Benzion Chanowitz, Mark Palmerino, Mark Rhodes

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The text for this newsletter was prepared using the [illegible] editor and **Fortune:Word** on a FORTUNE 32:16 computer. It was then transferred using Kermit to a PDP 11/44 computer running UNIX and prepared for typesetting with the **troff** program.

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The UNIX Directory

Managing Disk Usage

The *df* and *du* commands.

You're low on disk space. Where does it all go? Twenty megabytes, 30 megabytes - sounds like loads of space. In fact, it would take a decent typist, who could type 50 words per minute (word = about 5 characters), over 250 8-hour work days to fill a completely empty 30 megabyte disk!

Ok, somehow you did it. The twenty or 30 megabytes has dwindled. When the menu starts, you are hauntingly reminded that 92 percent of the disk is in use (or, is that, 95, 97, 99?). What can you do?

UNIX provides a number of commands that can aid you in managing your system's disk space. Even if you have plenty of space now, the commands we will discuss here are indispensable for many situations.

Get More or Larger Hard Disks

There is one obvious strategy for increasing the amount of usable disk space. When your disk gets low, you can always buy a larger disk or buy another one. There are expansion cabinets and disk upgrades that represent relatively routine ways of increasing disk capacity. Actually, there are times when this is the right solution. At one time, an internal 10 megabyte hard disk was considered futuristic - after all, it is the equivalent of over 27 IBM PC diskettes! However, as the power of the Fortune increases, it quickly outgrows the ability of the disk to efficiently support certain demands. When the first Fortunes were introduced, the multi-user version could support 2 or 3 users simultaneously. Under these circumstances, a hard disk of 10 or 20 megabytes was often sufficient. However, with the advent of the new Fortune SX, with its faster clock speed and improved operating system, the number of users that can be supported has doubled and tripled. With more users, there is greater need for available disk space. The main point here is that there are many times when a larger disk is the right choice. If you feel this is the proper option for you, we highly suggest you contact your dealer for more specific information on the disks, as well as for the support that is available with an upgrade.

Living With What You've Got

If buying a larger disk is not appropriate for you or if you find yourself running out of space again after you have bought a larger disk, there are still other ways of preserving and/or increasing disk space. Actually, disk space is a peculiar thing. You really don't notice it until you don't have it. If you have used your computer for a while, you have encountered this rather irritating problem. How many times have you seen "**Write failed - file system full.**"?

It's a little late once the system has run out of space. What one needs is a way to monitor how much space is currently being used. The UNIX command **df** (which stands for **d**isk **f**ree) does just this. (For the remainder

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Disk Usage,

Cont'd from previous page

of this article, we assume you are in the UNIX shell and the dollar sign is the UNIX prompt in our examples. However, **df** and **du** can be accessed from the **Global Menu** by selecting **S2)**. We also suggest, in order to attain maximum benefit from this article, that you sit in front of your Fortune and try the commands we illustrate in this article. Now, if you type:

```
$ df
```

you will see:

```
Filesystem   Mounted on   kbytes    used     free  % used
/dev/hd02    /            17991     16820    1171    93%
```

This command displays the number of blocks being used on a particular file system. In the above display, generated from a Fortune with a 20 megabyte drive, we see that there are a total of 17991 blocks of total storage. Of this total, 16820 blocks are currently being used and this leaves 1171 blocks free. We are also told that 93 percent of the total is currently in use. When the **df** command is used by itself (as in the example above) it defaults to displaying information about the system disks described in a special file called **/etc/fstab** (in this case /dev/hd02). If we have a floppy mounted to the **/f** directory, we can find how much free space there is on the floppy by typing:

```
$ df /f
```

```
Filesystem   Mounted on   kbytes    used     free  % used
/dev/fd02    /f           773       715      58      92%
```

The above output indicates that the file system **/dev/fd02** which is mounted on **/f** has a total of **773** blocks of which **715** are being used. This leaves **58** free and, of the total space available, **92** percent is currently being used.

The **df** command is indispensable for keeping track of the amount of space being used. It is a good idea to get in the habit of doing a **df** each time you log in just to have a sense of what's being used. We have **df** in our **.profile** files so that we see the disk usage every time we log in (see Volume 2.5 for more information about the **.profile** file). Fortune Systems apparently is of the same philosophy since they make this an integral part of their menu. You'll notice the blinking line that precedes the main menu. It tells you the percentage of disk currently being used. What you may not know, however, is that this line can be produced by the command **df -f**. Try this command to your UNIX prompt and see what happens. Flashy, huh?

Locating Overflowing Directories

The **df** command only serves to alert one that there is an impending problem. When it appears that some sort of action is necessary, we need ways of locating directories and files that can be modified or deleted. At this point, we should say that keeping disk usage under control, while being the primary responsibility of the person in charge of the computer, is ultimately a duty for each person that uses the computer. There are some simple things that each user can do. The main thing to do is to keep your directories free of "dead weight." It is easy to keep files in your directory that are old and relatively useless. Keep track of these files and if you don't need them very often, back them up on a floppy and then delete them from the system. An easy way to find any old files that are used infrequently is to get a directory listing of your directory. A full directory listing (such as **ll** or **ls -sail**) will give the date of last modification for each file. An even more appropriate command would be **ls -lrt** which will display your files with the modification date sorted so that the oldest files are at the top of the list:

```
$ ls -lrt
```

```
total 378
-rw-rw-r-- 1 mbp     29 Feb 11  1985  begin.date
-rw-rw-r-- 1 mbp     29 Feb 11  1985  end.date
-rw-rw-r-- 1 mbp    655 Mar 12  1985  whatis_insert
-rw-rw-r-- 1 mbp   4952 Mar 12  1985  instruct.rmsg
-rw-rw-r-- 1 mbp   6239 Mar 12  1985  instruct.rmsg.
-rw-rw-r-- 1 mbp     15 Mar 29 09:52  plan.txt
drwxrwxr-x 2 mbp1856 Apr 27 20:31  cbl
drwxrwxr-x 2 mbp  736 Apr 27 20:38  2860a
-rw-rw-r-- 1 mbp    658 Jun  5 12:52  termcap.vt100
-rw-rw-r-- 1 mbp   8886 Jun 11 20:52  reference.dat
-rw-rw-r-- 1 mbp   5573 Jun 16 13:17  article.notes
-rw-rw-r-- 1 mbp   1405 Jun 27 21:25  orgvectors.dat
-rw-rw-r-- 1 mbp   7660 Sep 15 14:10  events
```

The very last column of this output indicates the name of the file. The preceding 3 columns indicate the month, day and time that the file was last modified. For example, locate the file called **plan.txt**. The last time this file was modified was **Mar 29 09:52**. In other words, the last time this particular user used this file was at least 7 months ago. A file that is 7 months old is a very good candidate for being removed from the system (unless you are using that file without modifying it). The idea, then, is for each user to keep track of the age of their files and do their part to keep the disk usage down by removing unused files.

Isolating Large Directories - the *du* command

The **df** command is fine for finding out how much of the disk is currently being used. Presumably, however, when you run into the problem of disk space that dwindles to a dangerously low level, you will want to locate the areas on disk where you can delete files. One UNIX command that is extremely handy is **du** (which is said to stand for **d**isk **u**sage). The default **du** gives a listing of all directories and subdirectories along with the amount of space being used by them. My home directory is /u/mbp and when I type:

```
$ du /u/mbp
```

I see,

```
20      /u/mbp/wines
1       /u/mbp/2860a
2       /u/mbp/cbl
35      /u/mbp/diss
160     /u/mbp/symlog
549     /u/mbp
```

The last line (i.e., **549 /u/mbp**) gives the total amount of space I am using. The lines preceding this line give the amount of space that my subdirectories are using.

See **Disk Usage**, page 7

Bulletin Board,

Cont'd from page 1

What Information will be on the Bulletin Board

The bulletin board is divided into categories, or topics, called notefiles. These notefiles are focus points for dialogue. We have already established notefiles for the following topics: News from Fortune, Fortune Software Catalog, Accounting Issues, Fortune:Word Issues, Multiplan Issues, Programming in C, BASIC, and Fortran, Database Use, UNIX programming, etc. In addition, we will have areas for professional or vertical interests such as lawyers, doctors, manufacturers, parishes, etc. As interest in any other topics emerges, those areas can be created.

Once these general areas are established, we are dependent on the users to contribute information. In the beginning, you may be the first to write notes on some of these topics, but in short order there should be quite a lot of information on the system.

How do you use the system

It's really quite easy. The first thing you need is a 1200 baud modem (we plan to get a 2400 baud modem as soon as there is enough interest). The next thing you need is a communications program. Possible candidates are Fortune's ITE (Interactive Terminal Emulator), SST's Handshake ITE, or the public domain program kermit. (If you don't already have a modem and software, The Cambridge Consortium is planning to offer a special rate on them shortly.) You do not need to have multiuser For:Pro and you don't need to have a Comm-A board, although the extra ports will make it more convenient. (A modem can be plugged into tty01, the port usually used for a printer).

Once you have the modem and necessary software, you need to tell your computer that you want to use a modem. If you don't know how to do this, you'll find instructions in the next issue.

Once you have all of the preliminaries out of the way, all you need to do is to call our modem number, 617 648-1263, which is available 24 hours a day. Once you do this, you should get a login message which looks somewhat familiar. It will say:

/u/fortune Bulletin Board System
If you don't have an account log in as user
Please Type in your name and press <RETURN>:

As you can see from the logon message, if you don't have an account on our system, you should log in as **user**. This will give you limited access privileges, but will allow you to see the basic structure of the system. If you'd like to get an account on the system, you can do it in one of three ways: 1) mail a message to operator, 2) write a message in notefile 3 18, notes for system administrators, or 3) call us at 617 876-4763.

When you register to use the bulletin board, you will get a printed manual explaining in detail exactly how to use the system. What follows are some brief instructions which will get you started.

Continued on next page

Bulletin Board,

Cont'd from previous page

Viewing Notefiles

Once you have logged in, you will get a short message with any new information about the system, followed by a menu of notefile topics. Note that at the bottom of the screen it says "Enter your selection or press RETURN for more topics". There is more than one screen of topic areas -- don't forget to view them. To enter a particular notefile, simply type in its number and press RETURN. You will get another menu of notes that have been entered into that file. Again you may enter the number of the note that you wish to read. The desired text will appear on your screen, one screen at a time. Messages at the bottom of the page will prompt you on what to do next. Each note is called a **basenote**. It can have many responses to it, which typically would be comments from other users. As you go through the notefile, both the basenote and the responses will be displayed. At any time, if you'd like to stop what you are doing, you can type **q** for quit, which will pop you back up one level. If you keep hitting q, once you reach the top most level, it will ask you if you want to log off the system.

Writing in the Notefiles

A bulletin board is only as good as the contributions from its users, so we heartily encourage everyone to participate in the system. In order to write on the system, you just enter the place on the system you want to write in, either in notefile or at a basenote, and you type the letter **w**. This will put you in the screen editor, which many of you will be familiar with from your own system. Our version of screen requires that you use a Fortune terminal to access the bulletin board. (For most of you, the system will assume that you are using a Fortune terminal. If you don't plan to use a Fortune, please let us know that when your account is established. A newer version of screen which will work with many terminals is available from Bell Technologies, 415 792-3646). Screen uses a command structure similar to Multiplan; your choices are displayed at the top of the screen and you make your choice by typing the first letter of the command you'd like. For instance, to create any new note, you need to use the **Insert** command to enter your text. When you are done entering, type the **ESC** key and the command line will reappear. To save the file, type **E** for Exit and **U** for Update. Your note will then be entered into the system. If you'd like to delete it, you can do so by typing **d** for Delete. For more information on how to use screen, you can download the file called sctutorial which is located in the software library lib/utilities/editors/screen.

Uploading and Downloading Software

One of the nicest things about the bulletin board is the ability to share software. As noted above, the bulletin board is not a place to exchange software that should not be exchanged. If we find software placed on the bulletin board that cannot be traded because of copyright infringement, we will remove it immediately. That said, we encourage users to upload and download shell scripts, programs, glossary entries, etc.

This is a fairly straightforward task. The first thing you must do is determine whether the file is an ASCII file or whether it is a BINARY file. In general, any text or shell script is ASCII while programs, glossary entries, Multiplan templates, etc. are BINARY. Please see the **Electronic Communications** article in the next issue to understand the difference between ASCII and Binary files. If you would like to transfer an ASCII file, you can use any of the communication programs listed at the start of this article. If you want to transfer a binary file, you will be best off using **kermit**, which is available on our free software disk called **D.C. Grab Bag**. Let's say you want to download a file. Follow these steps:

Enter the Library Subsystem by typing **LIB RETURN**. Once you are in the library system, type **ls RETURN** to get a listing of the files and directories available. Next to the files will be a number which indicates the number of bytes in the file. This is important to know in order to determine how long it will take to transfer the file. (Divide the # by 70, which is the approximate transfer rate using kermit, and then by 60, which is the number of seconds in a minute. This gives you the number of minutes to accomplish the transfer.)

Change to the Directory you need by typing **cd directoryname** where directoryname is the name of the directory you are changing too. You may need to change through several sub-directories in order to get to the file you want.

Set the transfer protocol by typing **set RETURN**. You will then get a selection of transfer protocols. 7-bit ASCII can be used to download ASCII files using **Handshake ITE**. To download programs, you will need to select **Kermit 8-bit (for binaries)**. Select the protocol by entering the selection #. You will be asked if you want to save this protocol as your default protocol. (That's the one you'll always use unless you specify something else).

Download the file by typing **d filename**, e.g. d compress. If you are are using 7-bit ASCII format, you will see the file scroll by on your screen. Presumably you will have set up your machine to save the file in a file on your own system. If you are using kermit to download a binary file you should follow these steps: 1) As soon as you have typed **d filename RETURN**, you should disconnect from kermit by typing **SHIFT-6 c**. You will get the message *kermit disconnected.* You must quickly put your kermit into receive mode. If you aren't using kmenu, type **kermit rilb /dev/tty?? 1200 RETURN**. This stands for **Receive Image-mode line baud**. The line and baud are specified after the initial commands, e.g. /dev/tty05. If you are using kmenu, you must be sure to set the image-mode option to on, and then all you need do is choose receive and then you will get the message *kermit version ## Receiving file FILENAME as filename.* Your modem lights should flash and eventually the file will be transferred. Uploading files is done in a similar manner. If this is not enough information to get you going, you may call us to get more info on kermit and kmenu.

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Windows, Cont'd from page 1

Monitor Window Status

- Notes which window is current window
- Monitors how many windows are open
- Displays names of windows
- Notes which windows are zoomed

Personalize User Work Environment

- Customizes windows that will open automatically when the user logs on to the system or when **Fortune:Windows** is started
- Individualizes the keys used to perform **Fortune:Windows** functions
- Tailors "current window" border intensity

What does this mean

Fortune says that **Fortune:Windows** will change the way people work. In many senses, this is true. Here's an example. Let's suppose that you are composing the quarterly reports for your profitable business. You have already compiled the numbers in a Multiplan spreadsheet. As you are writing the text, you want to consult the spreadsheet. Let's assume that you have already created one window for Multiplan and one for Fortune:Word, then all you need to do is to hit the SHIFT key along with the HELP key. A menu pops up at the top left of your screen and displays your choices. When you choose **Switch Window**, a listing of the open windows is presented. You enter the number of the window you want and hit Execute and voila, you are in Multiplan. (Since you knew that you wanted to go to window number two, you didn't even need to choose **Switch Window**. **Fortune Windows** has a very useful shortcut -- all that would be necessary is to hit the number 2 as soon as the menu pops up and instantly you're in your spreadsheet. If you're in even more of a rush, you can customize your environment with a **Windowfast** key which lets you switch windows by hitting just 2 keys. You can also replace the default SHIFT HELP combination with other keys of your choice. More on this later.) After refreshing your memory with the numbers, you flip back to Fortune:Word by pressing SHIFT HELP 1. As you write some more, something occurs to you about your spreadsheet that you hadn't thought of, so you just flip back to it and make the changes. Now, you'd like the numbers from the spreadsheet to appear in your document. So once again you hit SHIFT HELP, while you are still in Window 2, and you see a choice on the menu which says **Take-up Data**. You choose this selection and the message "Move cursor to beginning of block and press Execute" appears. From here on, the commands are very similar to the Fortune:Word MOVE command. You move the cursor to the beginning location, hit Execute, and then move it to the end location and hit Execute, and voila, your numbers are transfered into a special buffer. Then you go back to Fortune:Word (SHIFT HELP 1) and once again invoke the popup menu. This time you choose **Insert Data**, press Execute and the numbers get popped into the report. It takes a few keystrokes, but after you have done it once or twice, it is pretty straightforward.

We used Windows in a similar way recently while we were using a modem to call MCI Mail to get flight schedules. Before we knew it, the information we wanted was displayed on the screen, and we hadn't thought to save it into a file. That's no problem with **Fortune:Windows**. We just used the **Take-up Data** function to take a picture of what was on the screen. Later, we inserted that into a Fortune:Word file with the rest of our itinerary.

These examples use what Fortune calls "Full Screen" windows. In a sense, these windows don't create what you might intuitively think of as windows. There aren't any borders or any messages to indicate that you're using windows. This is actually an asset--it makes it possible for any program to work with windows in full screen mode without modification. Only one application is visible on the screen at a time, but the trick is

See **Windows**, page 10

Bulletin Board, Cont'd from page 4

Sending Mail

Mail can be sent and received between users of the bulletin board. In order to use the **MAIL** subsystem, just type **mail RETURN**. You will then be prompted to enter your message and the recipient's user name. Note that mail can only be sent to valid users.

Getting Help

Help is available for most parts of the bulletin board. To get help, just type **HELP RETURN** and you will be supplied with information concerning the section you're currently using.

Exiting the System

You can exit the system by repeatedly typing **q** for quit. When you log off the system, the phone connection will automatically be terminated. If you get stuck somewhere, you can always turn off your modem or disconnect the phone line -- this will automatically log you off of the bulletin board. Disconnecting from ITE or kermit will not necessarily disconnect the phone connection to our system. In order to save yourself long distance charges, please be sure to make sure your phone has disconnected.

Costs for using the Bulletin Board

The Cambridge Consortium, Inc., publishers of **/u/fortune** *news*, is the operator of the bulletin board system. In order to cover our expenses, we have established the following rates. Please note that these rates will be restructured early next year as we begin to get an idea of bulletin board usage and the amount of work that it takes for us to maintain the system.

Registration for the bulletin board will cost $12.00. If you have paid $12 for membership in /u/fortune, this fee will be waived. For this fee, you will get an account name, a password, and a printed manual with instructions for using the system.

The initial use charge will be $90 which will give you seven hours of use on the system. Thereafter hourly use charges will be $15/hour.

Please feel free to experiment with the system using the **user** account name.

Josh Lobel

Disk Usage, Cont'd from page 3

With a listing like this I can quickly see that my subdirectory called **symlog** is taking up 160 blocks. If I were looking for a way to free up some space, I might begin by looking there. Note, however, that the total amount of space I am using is 549 blocks. My subdirectories are using 218 blocks (i.e., 20 + 1 + 2 + 35 + 160). That means my home directory, sometimes called the top-level directory, is using the balance, or 231 blocks. Thus, I might look there for some "dead weight."

In the above example, the **du** command was used on one person's directory. When there is a severe disk shortage, the person in charge might begin looking for ways to free up space by typing **du /u**. This would list all the user accounts, along with their subdirectories. (Note: Since this could be a long list, you might consider redirecting the output to file (as in **du /u > usrdu**) or piping the output to a program like **more** (as in **du /u | more**). Once you have this list, you can approach particular users and suggest that they remove files.

As a slight digression, let me explain why, in the above example, I chose the /u directory to begin looking for "dead weight." In most cases, the /u directories will be the most volatile directories. The rest of the UNIX directory structure is fairly set. For example, the /bin directory and the /etc directory contain UNIX commands that you will want to use. Aside from the fact that these directories are not expected to grow very much from day to day (or even month to month), you generally won't find very much to delete from these directories. This goes for the other directories like dev, f, h, lib and sa. As an exercise, you might try doing a **du** on each of these subdirectories to see the amount of space they are using on your system. Two possible exceptions to the above reasoning are the /tmp and /lost+found directories. The /tmp directory is often used by programs that open up temporary files. For example, editors (such as **vi** or **sc**) open up temporary copies of the document you are working on. These temporary copies are usually kept in the /tmp directory. There are two things to realize about this. First, if your disk is close to being full and you begin running some applications that use the /tmp directory for temporary files, then you could very well use up any free space you do have. Second, when a program runs properly, it does not leave anything behind in the /tmp directory. However, if a program bombs out before it has a chance to clean up its temporary files, then these files are left on the system. This is why it is a good idea to check the /tmp directory periodically. You may find some old temporary files sitting there. The /lost+found directory is used primarily during disk repair operations and mainly by the program called **fsck** (which stands for **f**ile **s**ystem **c**onsistency **k**heck). This program, which we cannot describe in detail here, will find files that are not properly connected to the file structure and will deposit them in the /lost+found directory. For the purposes of managing disk space, it is probably worth a look in this directory in order to see if there are any files there. If there are, you may want to back them up on floppies and remove them from the system. Finally, the /b directory might have files that could be deleted.

Conclusion

In this article we've discussed some preliminary ways of tracking disk usage. This included using the **df** command as well as the **du** command. These two commands are somewhat useful in the battle of managing disk space. Next month, in part 2 of this series, we will show you how to use the more powerful and versatile **find** command in order to seek out files that are large and/or old. In addition, we will show you how to automate, through the use of **cron**, certain disk space operations. Finally, we will illustrate the use of a public domain program called **compress** that can be used to reduce the amount of space a file is using.

(Note: **compress** *is available on our free software disk called "Compressor's Delight" which was announced last month in volume 2 number 5. We highly recommend sending for this disk before next month's issue so that you'll have* **compress** *on your system. We'll say more about* **compress** *next month, but we are exceptionally pleased with the results of this program and have found that it reduces the amount of space an inactive file takes up from 25 to, in some cases (especially with BASIC files), over 95 percent. Compressed files need to be uncompressed before they are used.)*

Mark Palmerino

The BASIC Advisor

Ray Wannall is president of BaSiC Software Corporation in Baltimore and is contributing to this publication independently.

Question: I was observing the work of an outside BASIC programmer whom my company hired to write a few custom reports, and it appeared to me that he was able to jump from menu to menu without using the normal menu selection process. How did he do this? I can see that it would save a lot of time if I could jump from, say, the Payroll File Maintenance menu to the Order Processing File Maintenance screen without pressing <F4> back to the Business Applications menu and going through Order Processing. Also, are there any other "tricks" I can use with the BAS selector screens? I have not ever seen any instructions for working with selectors.

Answer: Couldn't find it in the printed documentation, eh? Where have I heard that before? The fact is that you can perform several time-saving operations from any **BAS** menu screen. (Some of the following entries do not work on all versions of **BAS**, while others may require the installation of **IDOL** on some systems.)

To begin with, before you can jump directly to a selector screen you must first know the **SELECTOR NUMBER** of the screen you wish to access. The Selector Number is printed in the upper left-hand corner of each selector screen, and there are normally 99 selector screens available. When you enter the **Payroll File Maintenance and Inquiry** menu through the normal channels you will note that the Selector number is 53. To access this menu from any other menu, you enter **s53** (for Selector number 53) where it says "**ENTER SELECTION OR END: __**" and press <RETURN>. To go from there directly to the **O/P File Maintenance and Inquiry** menu, enter **s36** and <RETURN>.

When you try to directly access a selector number that has not been previously defined, for example **s99**, you will get the message, "**SELECTOR NOT ON FILE< RETURN TO CONTINUE**", and you will go nowhere. (You will also go nowhere if you try to jump to the screen you are already viewing.)

Perhaps you would like to see a list of all of the defined selector screens on your system without entering **IDOL** and printing the list via **IDOL Documentation Functions** (selector 4, option 9). You may do this from any menu by entering **DSN** (Display Selector Numbers) and <RETURN> . The computer will ask you to **ENTER STARTING SELECTOR NUMBER** for the display. By pressing <RETURN> you may see all of the selector numbers beginning with selector 1. The Selector Number is displayed in the left column with the Selector Name to the right. Once a page has been displayed on the screen you will get the prompt, "**CONTINUE (Y/N) OR SELECTOR NUMBER**". Use the defined <F1>, <F2> and <F4> function keys to move through the display or end. (Note: for some reason, the <RETURN> key acts as an affirmative response. I assume it has been programmed this way for the convenience of the impatient operator.)

Once you have memorized the selector numbers of the more frequently used applications, moving through the **BAS** is a breeze. One of the more interesting qualities of **BAS** is that it "remembers" where you have been no matter how sporadic your movement has been. When you exit a menu with the <F4> key, you will go back to the menu from which you "jumped" rather than to the menu which normally precedes the current screen.

Aside from selector "jumping" and displaying selector numbers, there are several other legitimate entries that can be made from any **BAS** selector. In all cases, entry is made at the selector prompt, "**ENTER SELECTION OR END: __**".

DFN (Display File Numbers) - This command is similar to **DSN** in operation. When entered, **DFN** gives you a list of **IDOL**-defined files on your system. (By the way, **BAS** is a system of **IDOL**-defined programs and files.) There are four columns in the File Number display. The first of these is the File Number, followed to the right by the technical name of the file (or a series of six dashes if the number is not yet defined), the Data Base in which the file is used, and the full name of the file. There were originally 199 file numbers available, but newer versions of **BAS** may contain more.

797 This provides a quick access to file maintenance for any file listed in the **DFN** display (above). When you enter 797 and hit <RETURN> you are asked to enter the File Number or Name of the Desired File. By entering either the number or technical name of the file you wish to see, you will go directly into the file maintenance mode and be allowed to add, change, delete or inquire about records in that file. (If **IDOL** is on your system, you will also be able to generate reports from that file.)

798 This is a quick way to enter into the **DEFINE A RECORD FORMAT** utility provided with **IDOL**.

799 This allows you to directly access the **Selector Dictionary Header and Detail Records** for maintenance.

800 This puts you into your **Data Entry Function Control Records**. I recommend that, unless you are technically inclined, you do not fool with 798, 799 and 800.

CMT (Clear Multi-Tasking flags) - **CMT** is a potentially dangerous entry that can blow up the natural progression of a **BAS** application. It clears the message, "**CHOICE CONFLICTS WITH ANOTHER TERMINAL**", when you try, for example, to run the Invoice-Memo Printing before the Orders are registered. Indiscriminate use of **CMT** has been the cause

Basic Advisor, Cont'd

of many an ulcer. **CMT** is normally used by technicians to "reset" applications that have gone haywire.

BASIC This clears the screen and puts you into the **BASIC** programming command mode (or > prompt). To exit this mode, you must type **RUN "DOL"** and <RETURN>.

SHELL This throws you into the **UNIX** command mode without losing the **BAS** selector from which you exited. To return to the selector, hold the grey <CTRL> key and enter D.

UNIX This option will throw you back to the Global Menu (or back to the place from which you accessed **BAS**).

LOF (Log Off) - This allows you to exit the **BAS** Selector system and returns you to **ENTER OPERATOR CODE OR 'F$' TO END.** Remember, **LOF** works with any **BAS** menu, so you do not have to be at the **FORTUNES SYSTEMS BUSINESS APPLICATIONS** menu to use it.

END This, of course, works the same way as pressing the <F4> key does.

****M** This allows you to send a message to other active devices in **BAS**. These include all terminals and printers defined and active on the system. You are asked to enter the message destination, to which you may designate T0 thru T7 (terminals), LP (printer one), P2 thru P5 (other printers) or **ALL** (everywhere). You are then allowed to send up to 132 characters of message text. The message will be displayed at the destination printer(s) immediately and at the destination terminal(s) the next time a menu is entered.

UTL This entry sends you to the **FORTUNE BUSINESS BASIC UTILITIES** menu. Exit back to the **BAS** selector by pressing <F4>.

Finally, you may run a custom-written program directly from any **BAS** selector by entering a colon (:) and the program name. Do not use spaces between the colon and program name. If the program you request does not return you to the **BAS** selector, complain to the person who wrote the program.

For Sale

One 32:16 with 20MB disk, 768K RAM, and Multiuser For:Pro 1.7. Includes a hard disk expansion cabinet with 20MB tape backup and associated software. Six Fortune Terminals. One IDS Printer. Multiplan, Extended Fortune:Word, Ten 20MB Tapes, 30 Floppies. All cables and documentation. On-Site Maintenance through March, 1986. Call Dixon Newbold at 401 941-1700.

Talandic Research Corporation in Pasadena, California has a 20MB 32:16 for sale. Includes 256K Memory, 4-port Comm-A, 3 Fortune Terminals. Also have Fortune Business Applications systems, unused. Fortune:Word and Multiplan. Call Cynthia Carney at 818 793-4161 with best offer.

Windows, Cont'd from page 6

that you can switch back and forth so easily between them, completely maintaining your place in both programs. Without **Fortune:Windows**, you would need to back out of each application before going to the other. In addition to flipping from Fortune:Word to Multiplan, we use it to toggle between different databases using Progress, something that is otherwise impossible.

Uses for Data Transfer

The most obvious use for the **Take-up Data/Insert Data** function is to move data from Multiplan to Fortune:Word and vice versa. (It should be noted that when you do this, the information you move becomes straight text -- words from Fortune:Word must go into cells that have been formatted "continuous" in Multiplan and numbers from Multiplan become text. If you make changes in the numbers, the totals will not be recalculated.) There are several other useful applications. If you are writing documentation for any program or system, it may be useful to capture exactly what is on the screen and dump it to a file to be included in your documentation. The example below shows how this looks with a Fortune:Word document.

Doc windows Page 2 Line 41 Pos 1
word Format 1 Spacing 1 Length 54
1(1 . . . . . 1 . . . . . 2 . . . . . 3 . . . . . 4 . . . . . 5 . . . . . .
several other useful applications also. If you are writing documentation for any program or system, it may be useful to capture exactly what is on the screen and dump it to a file to be included in your documentation. The example below is how this looks with a Fortune:Word document.

It can also be useful for importing or exporting information from an ASCII file into Fortune:Word or Multiplan. Again it should be noted that in Multiplan this information will not necessarily be considered to be numeric (although it would be possible to format it so that it would be). If you know UNIX, the concept of redirection will make sense -- when you input from a file, the input to the program is temporarily redirected from the keyboard to the file. Transferring data between other applications may or may not be possible depending on how that application expects to get data. Specifically, it depends on how the application expects the pieces of data to be separated from each other. For instance with a Multiplan document, each piece of information is entered by hitting the Execute key or a cursor key. The Return key will not enter the number. **Fortune:Windows** knows about this and makes provisions for it -- but with other applications, you may have to fiddle with it some more in order to make the transfer work. There are plans to include a "user-definable" conversion filter at some time in the future. If you are only working with Fortune:Word and Multiplan, there is no need to be concerned about this.

Partial Screen Windows

With **Fortune:Windows**, it is possible to create up to eight windows on your screen simultaneously. For instance, you could have Fortune:Word and Multiplan and a clock and a reminder section displayed on your screen simultaneously along with a section reserved for your cohorts so that they can write messages to you. Although this is possible, it is probably not practical for several reasons. First of all, each partial screen window that you open in the system adds more work for the computer. This could easily result in a degradation in performance. System performance depends on many things, including how many users you have, which applications each of the users is running, and which applications you have in each window, but it is fair to say that in many cases you may experience a noticeable slowdown. Secondly, a partial screen generally does not provide enough of the data to really get a feel for each application -- there isn't enough context to give it meaning. So ideally what you would like to do is to see just a bit of the screen in order to jog your memory, and then Zoom out to a full screen when needed. Unfortunately, although **Fortune:Windows** does include a function called Zoom-de-Zoom, it doesn't give you quite as many options as you might expect. If you have a Fortune:Word document displayed in a half-screen window, when you Zoom out on it, other windows will be cleared from the screen, but the document won't expand to fill the entire screen -- its size is locked in when Fortune:Word is first executed. Certain applications may not work like this -- the menu system currently will expand -- but until others work more as you'd expect this feature is less useful than it might be. In fact, at present it is probably most useful for the Global Menu and applications menus that are partially hidden when you use them in less than full screen mode.

We understand from Fortune that the Zoom-de-Zoom feature that has been included with **Fortune:Windows** is a feature that is in its infancy. It is our understanding that Fortune will develop this feature further in the future.

Ease of Use

The Window system is very easy to use. The popup menu works in the same way as the Fortune:Word menu and it is more or less self-explanatory. Creating windows is as easy as creating a new Fortune:Word document. Transferring data between applications may take more experimentation and a few mistakes, but it is basically straightforward. We feel that because **Fortune:Windows** is so intuitive, most users can master its basic functions in a matter of minutes. Considering the power of this system, this is quite impressive.

Perhaps one of the nicest things about **Fortune:Windows** is that it lets you do things on the fly. If you're in Fortune:Word and you suddenly decide that it would be nice to go off and do something else on the computer, it lets you leave your task, go and do the other thing and then return to the first one where you left off. This might be especially useful when you start that huge spreadsheet recalculating and you don't want to abandon your terminal while Multiplan does its work.

As was mentioned at the beginning of this article, Fortune Systems says that **Fortune:Windows** will change the way you work. Based on our experience, this is true. Our work style involves doing many things simultaneously -- **Fortune:Windows** lets the computer do the same thing. Interruptions that used to involve many minutes to switch back and forth from one thing to another can now be handled in a flash.

Customization of the User Environment

If you'd like to make **Fortune:Windows** very easy to use, there are several things you can do to tailor it to your own uses. First of all, you can have several windows started from the moment you log on in the morn-

See **Windows**, page 14

UltraCalc®

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As you may have discovered by now, choosing a software package by its list of features or by the claims made by its manufacturer can be very disappointing. The best way to judge software is to use it. The next best way is to talk to people who have used it. Good software gets a reputation for being good.

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Now available for the Fortune 32:16

MINITAB - A Statistical Analysis Program

MINITAB is a program that gives one the ability to perform a wide range of statistical analyses. Its capabilities include descriptive statistics (e.g. calculating means, standard deviations, variances, mode, etc.), inferential statistics (t-test, Analysis of Variance, etc.) and modeling of various sorts (regression and time series analysis).

Perhaps MINITAB's greatest virtue is the fact that it is an interactive program that uses commands that are very user friendly. We will illustrate some of these commands below. Another virtue is that there is a text book that is well suited to teaching the novice user the basics of MINITAB. In fact, this text book has been used in many introductory statistics courses in universities. A final virtue is that there is an active MINITAB user group.

How does one get started?

In order to do statistics one needs data. Once one has data one needs to get it into MINITAB so that it can be worked on. This requirement is similar to that of using any typical spreadsheet program like Multiplan. There are three basic ways of getting data into MINITAB. The first way is to get into MINITAB and enter the data from the keyboard and then save it as a MINITAB worksheet that is retrievable. The second way is to read the data from a file in your directory. The third way is to read the data from a MULTIPLAN spreadsheet. Thus, MINITAB allows you to transfer data from Multiplan into MINITAB and vice versa.

There are some limitations to the amount of data you can read into MINITAB. At present there are two versions of MINITAB that in essence differ in the size of the "worksheet". The small version allows one 6000 cells for the storage of data. The large version allows 60,000 cells. In order to use the large version you need 768K ram and a maximum process size of 512K. The company is currently working on another version of their program which will dynamically allocate the worksheet. That is, the worksheet will be set automatically, based on the amount of ram you have available.

Once you have data in your worksheet the full powers of MINITAB can be brought to bear upon the problem at hand. The commands to perform calculations, ranging from bivariate plots and descriptive statistics to multivariate regression and analysis of variance, are simple and straightforward.

An Example

What follows is the output from a MINITAB session. In this particular session we first read in a data set that had been previously saved from MINITAB. We did this with the "retrieve" command for the file that is named "pulse3". Then we used the "info" command to give us some information about the present state of the worksheet. Note that this lists the names that were given to columns of the worksheet. In the worksheet, columns represent particular variables and MINITAB gives you the capability of naming columns. This is an essential feature that allows one the ability to look at a particular data set at some later point in time and still know what kind of data is in a certain column.

```
MTB> retrieve 'pulse3'
MTB> info

COLUMN    NAME          COUNT
C1        PULSE1           92
C2        PULSE2           92
C3        HEIGHT           92
C4        WEIGHT           92
C5        SEX              92

CONSTANTS USED: NONE
```

After the "info" command we use the "describe" command to give us some descriptive statistics on the data in C3. The column C3 is named "height" and contains the height in inches of the 92 people in this data set. (Data can be manipulated by invoking either the column name in single quotes, 'height', or the column number, C3.)

```
MTB> describe 'height'
               HEIGHT
N                  92
MEAN            68.72
MEDIAN          69.00
TMEAN           68.78
STDEV            3.66
SEMEAN           0.38
MAX             75.00
MIN             61.00
Q3              72.00
Q1              66.00
```

Next we demonstrate the "histogram" command which produces a frequency histogram of the data in C3. Then we correlated the data in C3 and C4 (i.e. we correlated height with weight).

```
MTB> histogram 'height'
 HEIGHT

   MIDDLE OF        NUMBER OF
   INTERVAL         OBSERVATIONS
      60                 0
      62                 7      *******
      64                 6      ******
      66                13      *************
      68                17      *****************
      70                17      *****************
      72                15      ***************
      74                14      **************
      76                 3      ***

MTB> correlate 'height' 'weight'
CORRELATION OF  HEIGHT AND WEIGHT  =  .785
```

Finally, we performed a t-test on C3 using the data in C5 as a grouping variable. Using a t-test in this manner basically answers the question of whether or not women are significantly shorter than men.

```
MTB> twot 'height' 'sex'
TWOSAMPLE T FOR HEIGHT
SEX       N        MEAN        STDEV      SE MEAN
1        57       70.75         2.58         0.34
2        35       65.40         2.56         0.43

95 PCT CI FOR MU 1 - MU 2: (-3.91, 14.62)
TTEST MU 1 = MU 2 (VS NE): T=9.70 P=0.0000
DF=72.5
```

Hopefully the above example output gives you an idea of the ease with which MINITAB can be used. Obviously, this article can not fully describe the capacities of MINITAB but if you have need of statistical computation capabilities you might consider MINITAB. I use various statistical packages and have found that MINITAB is a coherent data analytic system whose commands are extremely easy to use. Their interactive nature allows one to explore and poke around in one's data with ease.

What follows is an abbreviated list of headings that appear on the MINITAB quick reference card:

1) Entering Numbers
2) Outputting Numbers
3) Fortran Formatted Input and Output
4) Editing and Manipulating Data
5) Arithmetic
6) Column and Row Operations
7) Plots and Histograms
8) Basic Statistics
9) Regression
10) Analysis of Variance
11) Nonparametrics
12) Tables
13) Time Series
14) Exploratory Data Analysis
15) Sorting
16) Random Data Generation
17) Matrices
18) Stored Commands and Loops

For more information about MINITAB call or write:

MINITAB, 215 Pond Laboratory, University Park, PA 16802, 814-865-1595

Mark Palmerino

Windows, Cont'd from page 10

ing, so that there won't be any need to take time to create new windows during the course of the day. This also has the advantage of providing some control over the number of windows each user will create -- if all of the needed windows are there, there is less incentive to randomly open a multitude of windows that will to slow down the system. Windows started automatically in the background will not have a significant effect on performance, in most cases.

Secondly, you can customize the keys that are used to operate the window system. Although it is possible to change the SHIFT HELP combination for the Window-key, the most common customization is to make the RETURN key next to the keypad the **Windowfast** key. Once this is done, all you need to do to change windows is hit that RETURN key, followed by the number of the window you want. This can be done quickly with one hand and little trouble. When you do this, you don't even need to see the popup menu, making a fast program even faster. These customizations are accomplished by making additions to your **.profile** file. (Information on how to do this is contained in Volume Two Number Five of **/u/forutune** *news*, as well as in the **Fortune:Windows** documentation.)

Issues to be aware of

Like all things, **Fortune:Windows** does have its limitations. Perhaps the single most important thing to consider as you ponder buying this package is the amount of memory you have and the number of users that typically use your computer. In our experience, this product is probably best used with two or three terminals and at least a full megabyte of RAM. The system will slow down as you start creating new windows, and with less than a megabyte you will probably notice this pretty quickly. It can operate on 768K if you are strapped, although Fortune doesn't really recommend it. (In fact, Fortune now recommends that most users upgrade to at least a full megabyte for most applications. As system needs increase, the memory will be used for many purposes.) Actual memory needs will vary depending on how the system is being used. As noted above, full-screen windows are less demanding than partial windows. In a future article, we will discuss some of the ways that memory and swap space are used on Fortune systems; and we will give you some tools to help you evaluate whether or not you are in need of more memory.

The Windows program must keep track of all of the characters going to and from each application you are running. This information is all stored in special buffers in addition to writing it onto your screen. Because of this, you will notice that screen changes will occur slightly more slowly. Although some might consider this a disadvantage, for most people, the power that **Fortune:Windows** will provide overshadows the minor inconvenience.

Another limitation is the Zoom-de-Zoom feature. After seeing the Macintosh, your intuition would be that the zoom feature would work something like a window shade, which could lift to reveal your entire document. What actually happens is a slight paradox. When you start Multiplan or Fortune:Word in a small window, the program is set so that it works in that space -- e.g. when you move down a page it knows the page is only 10 rows instead of 25 rows (assuming the small window is 10 x 80) and only scrolls down 10 lines. This is helpful, because if the programs didn't size themselves to the screen size, then both the system and the user would get quite confused. However, the by-product is that when you zoom out, Fortune:Word doesn't know the window has changed size, so that the working area still remains small. In short, this feature will have varying usefulness depending on what application you are running in the small window. As we stated earlier, Fortune sees the addition of Zoom-de-Zoom as an added bonus that will be fully developed in the future, rather than as a present limitation.

The final limitation involves transferring information between programs. Currently, it is only possible to grab whatever is on the screen at the time you begin to pick up data -- the screen will not scroll down to reveal more of your spreadsheet or Fortune:Word document; so for large transfers, it is necessary to do it in chunks. Secondly, when you input from an ASCII file, the program seems to insert it more slowly than it should. The product's future direction will take into account improvement in these two functions.

Is Fortune:Windows for you

If you routinely use several applications during the course of a day, **Fortune:Windows** will prove extremely useful. Further, if you ever have need to transfer information between applications it can be indispensable. For people developing documentation of any kind, the ability to get a picture of the screen image is a handy one. As noted above, for some of our work with Progress, **Fortune:Windows** lets us do things that otherwise are impossible.

If on the other hand, all you do is straight word processing, you may not have a strong need for **Fortune:Windows.** For shifting between documents, you may find it more satisfactory to use the Fortune:Word ability to split the screen and put separate documents in each one.

We encourage anyone who is interested in **Fortune:Windows** to get a demonstration of it from your dealer. That is the best way to appreciate its features and ease of use. Whether or not you decide it's the right thing for you, you'll be impressed.

Once you have it, you will certainly find many ways to use it. Without Windows, it is possible to transfer information from Multiplan to Fortune:Word, although it is difficult to go the other way. You can use the **CMD ! master** command from Fortune:Word to call Multiplan, but it is not nearly as smooth a transition as with **Fortune:Windows**. The beauty of Windows is that you can switch back and forth between applications by hitting 2 keys, and each one is waiting just where you left off.

In short, with the Windows product, Fortune Systems has introduced a program that can contribute in a very real way to the way you use your computer. As Fortune's first step into total integration of office automation programs, it is a very impressive one that adds substantial power to their product. After using it for several months, we wouldn't want to work without it.

Josh Lobel

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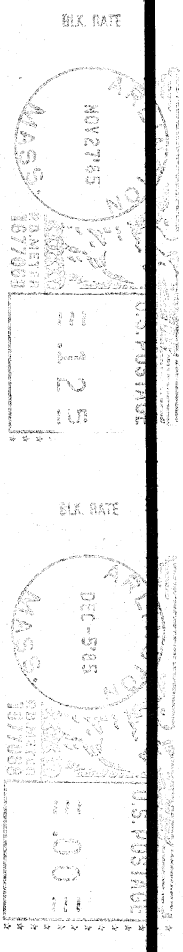

/u/fortune* *news. . .*

Newsletter for Users of the Fortune 32:16 Computer **December 1985/Volume 2 Number 7**

News from Fortune

The recent news from Fortune comes from last month's COMDEX show in Las Vegas. Fortune Systems was there with a large booth displaying many of their recent products, including the SX-70 series, networking hardware and software, Fortune Basic Workstation, Fortune MS-DOS Workstation, and graphics hardware and software. Along with these displays, Fortune invited several software and hardware vendors and Master Dealers to participate in their booth.

As we understand it, **Fortune:Link,** the networking hardware and software for Fortune Systems, has been shipped since October. **Fortune:Link** can connect up to 255 Fortune 32:16's with the ability for any of them to share any resources they desire. This means that any system can use the disk, modem, printer, etc. of any other system on the network. The maximum transmission rate of the **Fortune:Link** hardware is 2.5 megabits per second. However, because of protocol handling, the data throughput between computer memory and computer memory is about 300 kilobits per second. The **Fortune:Link** hardware is an implementation of Datapoints' ARCnet. It is a baseband network with the Bus/Tree topology and token passing access control method. By using Hub connectors to interconnect computer systems, it allows end-users to design and expand the network configuration with relative ease. Reportedly, the token passing access control method provides the best performance of the access control methods available.

Fortune:Link and **Fortune:Windows** (Fortune's windowing software which was described last month) provide Fortune users with actual simultaneity and integration of Fortune applications, regardless of whether the application is resident on a local system or a remote system. You can move quickly between applications on different systems, transfer data from one application into another on a different system, and process multiple interactive tasks on multiple systems simultaneously. .all from one terminal.

Fortune Systems also demonstrated the new **Fortune Intelligent Workstation** product line -- the **Fortune Basic Workstation** and the **Fortune MS-DOS Workstation**. **The Fortune Basic Workstation** supports multiple languages, and multiple keyboards. It can be used as a terminal to the 32:16 multiuser system and can also be upgraded to a **Fortune MS-DOS Workstation**. According to Fortune, the Intelligent Workstation units are now OEMed from a high quality and reputable

See **News from Fortune**, page 2

Featured in this Issue. . .

The UNIX Directory

Managing Disk Usage

The *find* and *compress* commands.

In the last UNIX Directory, we discussed some ways for you to keep track of disk usage, mainly by using the **df** and the **du** commands. This month we will continue with the topic of managing disk space by showing you how to use the versatile **find** command in order to seek out files that are large and/or old. In this article, we will also explain compression routines that reduce the amount of space that a file is using.

The *find* command

This command, as its name suggests, is used for finding files. Often **find** is used to ascertain whether or not a particular file is on the system. For example, if we want to see whether the file called **memo.txt** is on the system we would type:

$ find / -name memo.txt -print <CR>

The way the above command reads is "**find** the file whose **name** is **memo.txt** beginning at the / directory and when you find it **print** out its location." The slash (/) in the command tells **find** where to begin looking. If Bill (a typical Fortune user) wanted to see if he had a file called memo.txt in his directory he would type:

$ find /u/bill -name memo.txt -print <CR>

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News from Fortune,

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manufacturer and incorporate a very sleek, low-profile design. The MS-DOS workstation is functionally compatible with an IBM Personal Computer. It is available in two configurations: a dual-floppy system or a hard disk system. The **Fortune MS-DOS Workstation** can either be used as a standalone MS-DOS system or be used as a terminal for the 32:16 multiuser system via **Fortune:Works**.

The **SX-70's**, Fortune's high speed computer, were also there and seemed to be zipping along. It's hard to comment on these systems without doing benchmarks, but we have heard that they are performing well.

The graphics hardware and software seems to be getting off the ground. Fortune was demonstrating a couple of graphics programs that allowed you to create and manipulate images on the screen. These can then be output to a laser printer, plotter, or other devices that are currently supported. One of the very nice developments is a driver for a standard Fortune ASCII terminal which simulates a bit-mapped display using the block mosaic characters that are available on these terminals. The displays are not presentation quality, but they do give you a very real sense of what a display will look like when it is output on a plotter or printer. This gives the user the ability to do some fine tuning before printing the image. Watch for more news on this in the months to come.

/u/fortune *news. . .*

Editors Josh Lobel, Mark Palmerino
Associate Editor Benzion Chanowitz
Advertising Manager Mark Palmerino

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/u/fortune *news*, 20a Prescott Street, Suite 28, Cambridge, MA 02138. Telephone 617 876-4763.

The text for this newsletter was prepared using the **vi** editor and **Fortune:Word** on a FORTUNE 32:16 computer. It was then transferred using Kermit to a PDP 11/44 computer running UNIX and prepared for typesetting with the **troff** program.

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While we were at Comdex, we had a chance to see the new 6-port **CommA-6** (Intelligent Asynchronous Controller) boards. **CommA-6** allows you to increase the connectivity on a 32:16 without performance degradation. It has been shipped since last December.

There were also some interesting software products demonstrated at the show. One is a scheduling program called **Softrak MicroTrak Project Scheduling** from SofTrak Systems. This program uses critical path analysis to organize your projects. As they say in their literature, "MicroTrak is a project management tool that can schedule projects from the simplest to the most complex: a move across town, the design and manufacture of a new product, or the construction of a high-rise office building. MicroTrak automates scheduling and facilitates updating the schedule based on actual progress. MicroTrak allows you to plan projects, coordinate resources, track accompanying costs, evaluate "what if" scenarios, quickly generate reports, and easily print time-scaled schedules."

SofTrak Systems has a special free trial offer that is currently available if you would like to try their scheduling package. If you would like more information on this, check with your dealer, or call SofTrak systems at 801 531-8550.

For those interested in IDOL programming, Jim Jones of Jones Business Automation Center has developed some very interesting tools to aid in application development. His package includes some very sophisticated screen painting tools for generating input forms, as well as programs that automatically generate standard input screens. For more information about these programs, please call Jim Jones at 704 525-0582.

Another program of interest is a package called **Status** from CP International. This program is used for searching large databases of text for the occurence of specified words or phrases. For example, suppose a lawyer needs to search through thousands of pages of depositions to find all of the places where the words "accident" and "pushed" appear. With **Status**, a query like that could be done in a matter of moments. This is made possible by creating an index of every word in all of the documents that are part of the database. Documents can be loaded into the database directly from **Fortune:Word**. For more information on this product, contact your dealer, or call CP International at 212 815-8691.

In addition to this software, MDS of Van Nuys California demonstrated their 9-track tape drive that works with the Fortune. This unit reads and writes standard 9-track tapes that are compatible with most minicomputers. They can record data at 800, 1600, and 3200 BPI. You can reach them at 818 784-3460.

Josh Lobel

The Basic Advisor

Ray Wannall is president of BaSiC Software Corporation in Baltimore and is contributing to this publication independently.

Question: Please explain CCNVZ.

Answer: Oh boy, I was afraid someone would get me into this! CCNVZ is the main control file for BAS and very important for IDOL also. It should always reside in the /b/BDATA directory or a subdirectory thereof so that it will be captured every time you conduct an end-of-day data file backup. Should you ever lose CCVNZ you will learn first-hand the true meaning of the word "headache".

If you are up and running in BAS you have already spent much time working with CCVNZ, because many of its records are created and maintained by the end user. Other records were pre-defined when you first installed your software. You can see just how extensive this file is by entering DFN (Display File Numbers) at any BAS menu and pressing <RETURN>. You will observe that between file number 21 and file number 70 there are many CCNVZ entries (CCNVZH, CCNVZ, CCNVZA, CCNVZ0, etc.). Each of these "files" in reality represents a single record or group of related records in the main CCNVZ file. A thorough discussion of everything contained in CCVNZ would probably consume several of these articles, so let's restrict discussion to those records which you as end user may be manipulating.

To begin, look at the Business Utilities menu (selection number 8 from the main Fortune Systems Business Applications menu). Three of the eight selections offered here work with CCNVZ records:

INSTALLATION INFORMATION - This is not a normal BAS file maintenance screen in that only the change operation is offered. (If you have IDOL on your system and wish to see the entire record enter 797 <RETURN> from any menu and select file number 30. DO NOT DELETE THIS RECORD! If you do, you will not be able to bring up your business applications!) The single installation record in CCNVZ contains, among other things, the devices used by BAS in daily processing. When you add a terminal or printer via the Global Menu this record must be adjusted so that BAS is aware of the change. (You may also need to adjust some ipl files, but that's another story.)

OPERATOR INFORMATION - Several CCNVZ records are contained in the Operator Code portion of the file. Whenever you add or delete an operator or change the application restrictions, name or code of an operator, CCNVZ is altered.

COMPANY INFORMATION - All company codes on file for your installation are carried in CCNVZ. Adding a company adds a new record to the file.

In addition to these, CCNVZ holds all of your General Ledger control records for the various applications. All applications use the General Ledger Closing Period Record, and this is part of CCNVZ. Other General Ledger records in CCNVZ include the Payroll Deductions/Net Pay accounts, Accounts Receivable and Order Processing Sales Journal accounts, Accounts Payable Invoice Distribution accounts, etc. Each time you adjust one of these control records you should backup your data files so that you will have a current copy of CCNVZ.

Other CCNVZ records you may be altering include your Ship Via Methods file in Accounts Receivable and Order Processing and Miscellaneous charges in Order Processing.

Question: Help! I am trying to load my General Ledger Master Chart of Accounts and cannot get past the Ratio Indicator (field 7). The screen tells me I must enter blank, 1-6 or A-F. I don't want any of these options on this particular account.

Answer: Fortune Systems corrected many of the file oddities in the original SMC BAS, but they seem to have missed this one. If you want no ratio indicator on an account, press the space bar once when you get to this field. This enters a blank and allows you to continue entry.

Question: You suggested in a previous article that I use a support service for BAS. Where do I find one?

Answer: I'm not sure, but there ought to be some people out there who can provide these services - perhaps we can find out about them and let */u/fortune news'* readers know about them. Let's see if this will work:

Dear Anyone Out There Listening:

Do you provide telephone and/or on-site support for IDOL/BAS? If so, please contact me at (301) 448-9460. I would like to ask you a few questions about your service and report on your existence in a future article.

Yours truly,
Ray Wannall

There. Maybe we can stir up some activity before the next issue goes to press.

Question: Can I program graphics with Business BASIC?

Answer: You can bring up graphic characters on the terminal screen in Business BASIC with the following command:

PRINT 'ES', $6F$

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Your lower case letters, numbers and most symbols will now provide you with 63 different graphic characters. In order to exit the graphics mode, enter the following command:

PRINT $1F$

This will put you back into a legible mode in background. Note that when you type the PRINT $1F$ command, it will appear on the screen in illegible graphics. Do not worry, the interpreter will understand what it is you are trying to do.

You can also bring up an interesting set of alternate characters with the following:

PRINT 'ES', $6E$

Here you will find all kinds of surprises such as arrows, mathmatical fractions, the British Pound sign and the Greek Alphabet. You may exit this mode with the same PRINT $1F$ command.

Question: How important is it for me to have IDOL installed on my system? My dealer told me I didn't need it, but I have a friend with a Fortune whose dealer told him it was essential. What gives?

Answer: IDOL is a Data Base Manager which is used by dealers and independent developers as a tool for creating custom software. When used properly, IDOL can cut development time (and thus costs) significantly. Chances are your dealer determined that your specific needs were satisfied by BAS alone, while your friend's dealer anticipated his need for immediate alterations. (I like to think that dealers of Fortune Systems are honest and perceptive to the needs of the end user.)

You can always install IDOL at a later time if your programmer advises you to do so or if you are the adventurous type and decide to try your hand at creating your own custom software.

The following is contributed by Steve Rosenfeld of Superior Computer Systems, Inc. This dispatch is representative of actual dispatches that Superior Computer Systems have on file from their clients.

The "Random" Dispatch

Dispatch:	#190
Application:	BAS Accounts Payable (Standard)
Contact:	Sally System Manager
Description:	Error 2 in process of generation of journal for General Ledger
Start Time:	14:45

Sally telephones in and reports that this error has occurred at an operator's workstation a few minutes ago. Sally has followed procedures to capture the error prior to allowing the "NOTED" screen to be called up.

There are three facets of responding to this situation. First the cause of the error must be located and verified. Next, the effects of the error must be analyzed and possibly repaired. Finally, the problem originally causing the error must be corrected, hopefully permanently. If time-sensitive restrictions exist, a short term solution or bypass must be engineered.

The nature of an error 2, which we can refer to as a file overflow, is fairly innocuous. The process of adding records to a file has exceeded the designated capacity of the file. With proper attention, the problem is quickly resolved in a multi-user system, by expanding the file from another workstation, then restarting the program from the point at which it had stopped. This can be safely done as long as no other workstation was utilizing the file at the time of the error, and avoids the usage of the file until after the expansion is complete.

The full file can be confirmed via the "*FPSD" utility. There is no further damage to any files as a result of this error.

Response:	Expand General Ledger Transaction File (CGLTR) via *TPSD utility and record via IDOL file maintenance to IDOL-files.
Time Closed:	15:30
Elapsed Time:	45 minutes; held up by another journal being run independently, coming into same error.
Follow-up:	(User) Review G/L journal activity report for these journal numbers, but should not have any effect.

IMPORTANT NOTE ABOUT COMPRESS

We are thrilled with the way compress works. We've used it on many types of files and have found that it is fast and efficient - we use it often. However, we have found that you should **NOT** compress your BASIC files. If you have the Development Utilities Package, you should not use compact either. You will not destroy the file. However, after compressing and then uncompressing, the file will take up much *more* space than it did originally. This is not a problem with compress or compact, but is a side effect of the way files are constructed in the BASIC system. If you have already compressed some BASIC files and you are running into trouble, we may have some suggestions for reconstructing your files. In addition, you may have this same problem with certain files associated with databases. You may want to be safe and test the effect that compress will have on a particular type of file before you use it in a widespread fashion.

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In this case, **find** would look in /u/bill and any subdirectories for the file called **memo.txt**. If a file called memo.txt was in /u/mary as well as /u/bill, the above command would not locate the memo.txt in /u/mary. However, the command "find / ..." would find it.

Thus, **find** is often used to discover whether or not a particular file exists on the system. However, if we are in the predicament of needing to free up space for our system, then we don't simply want to know if a file exists or not. (We already know that too many exist!). Rather, we would like to know things like "which files out there are larger than 100 blocks", or "which files out there are more than 30 (or 60 or 90...) days old." I bet it'll come as no surprise that **find** can be used to answer these questions. The following is an example of how to find files larger than 100 blocks:

$ find / -size +100 -print <CR>

To locate files that have not been modified in the past 30 days you would type:

$ find / -mtime +30 -print <CR>

These commands can be combined so that more detailed questions can be asked. For example, if we wanted to find the files that have not been modified in the past 60 days and larger than 75 blocks, we would type:

$ find / -size +75 -mtime +60 -print <CR>

(Two notes: First, as was explained in last month's article, you may not need to look through the entire system with the **find** command. It's the **/u** directory that is the most volatile. Second, the file sizes in the BASIC system (/b directory) are not consistent with the UNIX file system. Thus, the find command will give some strange results.)

Now, consider the following scenario: When you left yesterday there was plenty of free space on the system. However, when you log on today you notice (because you have done a **df**) that the system now has 1500 fewer blocks than it did yesterday and your disk is 96% full. In this case, what you want to do is to locate large files that have been created or modified in the past day. If you issued the following command you would probably begin to get a good idea of where that space went:

$ find / -size +100 -mtime -1 -print <CR>

(A note on how to use the **mtime** flag: **mtime** stands for **m**odified **time** and this flag requires an argument to follow it. In our examples we have had "...-mtime +30...", and "...-mtime +60", and "...-mtime -1..." The arguments are +30, +60 and -1 in these examples. You'll notice that an argument has either a plus sign or a minus sign associated with it. Simply, "...-mtime +60..." means look for files that were last modified at a time **greater** than 60 days while "...-mtime -1..." means look for files that were modified at a time **less** than one day. The same reasoning applies to the argument following the **size** flag. In our examples we have been looking for files **larger** than 75 blocks (...-size +75...) or larger than 100 blocks (...-size +100...) but we could say "...-size -100..." in order to find files that are **less** than 100 blocks).

So far, we have used the **find** command to simply print out the names of files that meet our criteria (e.g., older than 60 days and larger than 100 blocks). When we use the **-print** flag, **find** sends the names to the standard output which is usually our terminal. Naturally, we can redirect the file names to a file, as in:

$ find / -size +100 -mtime +60 -print > big.old <CR>

After doing that, we can look at the file **big.old** and determine what we want to do with the files that have been located with the **find** command.

Suppose, however, we know what we want to do with the files when we find them. For example, when a program bombs out on the Fortune, it often leaves a file in your directory called **core**. This is a file that can sometimes be used by programmers to help determine why the program crashed. The problem with this is that after a while there will be 5, 10, 20 or more of these **core** files sitting on the system in various directories. This is an incredibly good example of "dead weight." We can use the **find** command both to locate these files and to delete them:

$ find / -name core -exec rm '{}' ';' <CR>

In essence, what we've done is taken the names of the core files and shipped them to the UNIX command **rm** which removes them from the system. A variant of the **-exec** flag is the **-ok** flag. If we typed:

$ find / -name core -ok rm '{}' ';' <CR>

we would have to type a 'y' or an 'n' for each file found to indicate whether we want it deleted or not.

We have touched on only a few of the ways in which **find** can be used. For more information about this command consult the manual page in the **Introduction to FOR:PRO** manual.

Automating find

Thus far, we have been managing disk space reactively - after a crisis has occurred. If we put **find** together with some other UNIX concepts, we can become more "proactive." For example, why should we wait until 10 or 20 **core** files glut the system before we take action?

Let's make a shellscript called **rmcore** which stands for **remove core files**. Using your favorite editor (like **sc**, **vi** or **ed**), create a file called **rmcore** and put the following line in it:

find / -name core -exec rm '{}' ';' &

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Next, exit from the editor and type:

chmod +x rmcore

in order to make that file **executable** (see Volume 1 Number 5 for more information about file permissions). You've just created a command that will delete all the **core** files from the system every time it is run. A simple way to automate this process is to add that command to your **.profile** file (This file is explained in detail in Volume 2 Number 5). If you did this, each time you logged into the computer this command would be put into action, thus keeping your system free of **core** files.

The above example is an extraordinarily simple use of a shellscript that helps manage disk space. Most UNIX system managers use shellscripts with dozens of these types of commands in them. If you spend some time thinking about your system, you will probably come up with a couple of other types of files that need periodic checking or deleting. If that's the case, you should automate this process. (For more information on automating the running of UNIX programs see Volume 1 Number 8 and Volume 2 Number 1, which explain how to use **at** and **cron**).

How to Reduce Space

The commands **df**, **du**, and **find** are all commands that help us determine why the system is full and where we can most likely begin to attack the problem. However, what can you do with the offending files once you've found them?

Obviously, the first method is to back up any unneeded files and remove them from the system. If you are the only user of your system, then when the files are found you will know just how important they are. The decision as to whether they can go will be yours. If, on the other hand, you are managing a system, the question as to whether certain files should stay or go requires cooperation between you and the owner of the files. Generally, if you tell the owner(s) that they have large or old files, they will admit that some of the files can go.

Compacting Files

A second method of freeing up space is to **compact** your files. There are UNIX programs available which are designed to reduce the amount of space that a file uses. The names for these programs vary but usually they will be called **compact**, **pack** or **compress**. Depending on the algorithm used and the type of file being compacted, these programs can reduce the amount of space that a file takes up from 10 to 70 or 80 percent. Thus, it is not unusual for a 100 block file to take up 40 - 70 blocks after it has been compacted.

IMPORTANT NOTE: We have found that you should *NOT* compress, compact or pack BASIC files. These files are stored in such a way that makes compressing them destroy certain important attributes. Please see the note elsewhere in this issue.

Techniques for compressing files have been around for awhile and take a number of tacks for reducing the size of a file. One technique takes advantage of redundancy in a file. For example, many files are composed of lots of spaces. If a file has 30 spaces in row, there really is no need to put all 30 spaces in the file. We could code the occurrence of 30 spaces with far fewer characters. Thus, one type of compression algorithm searches through a file and finds runs of characters and replaces them with a code that takes up less space. When finished, you have a file that usually is smaller than the original. (Note: It should be obvious that when compacting a file you are trading disk space for processing time. That is, to compact a file means running a computer program that produces a smaller file. This computer program utilizes the resources of the computer. In addition, when you want to use the file that you compacted, you must run another program (called **uncompact**, or **unpack**, or **uncompress**...) to reproduce your original file. It is important to realize that a compressed file is unusable when it is in its compressed

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state, thus compressing a file is a way to temporarily store that file in a manner which takes up less disk space.).

Another general technique for compacting files is to take advantage of known frequencies of the occurrences of letters in the English language. As you know, each letter is coded in the computer. Each letter and symbol on your keyboard has its own ASCII code and this code is always 8 bits long, or a byte. Well, this coding scheme does not take into account the frequencies of letters and symbols as they occur in the English language. The basic idea behind using frequencies of characters is that a new coding scheme is developed where some characters are coded by less than 8 bits and some characters are coded by more than 8 bits. What makes this scheme produce smaller files is that the characters coded by less than 8 bits are the characters that are the most frequent. Thus, when using this new code, as opposed to the ASCII code, you are more likely to end up with smaller files.

Compacting might be a useful way for you to free up space on your system. (Note: the program **compact** is part of Fortune's Development Utilities and must be purchased separately. The program called **compress** is available on our **Compressor's Delight** diskette.) If you try compacting certain files you'll see that certain types of files compact very nicely and others don't. For example, certain files show more than 90% compaction. We use MINITAB for statistical analyses and have found that MINITAB worksheets will also compact nicely. The following display shows some MULTIPLAN worksheets that have been compacted:

```
$ compact *.MP <CR>

budget.MP:      Compression :   48.58%
invest.MP:      Compression :   52.43%
mgcosts.MP:     Compression :   54.46%
savelog.MP:     Compression :   73.22%
stocks.MP:      Compression :   60.94%
```

The above display shows that MULTIPLAN worksheets also can be compacted very nicely. In the next display we compact the very same files, but we use the **compress** program that is available on our **Compressor's Delight** diskette. You'll see that **compress** does a better job on three of these files than **compact** but in two cases compact does better:

```
$ compress *.MP <CR>

budget.MP:      Compression: 50.27% -- replaced with budget.MP.Z
invest.MP:      Compression: 48.90% -- replaced with invest.MP.Z
mgcosts.MP:     Compression: 51.54% -- replaced with mgcosts.MP.Z
savelog.MP:     Compression: 82.67% -- replaced with savelog.MP.Z
stocks.MP:      Compression: 71.41% -- replaced with stocks.MP.Z
```

In any case, it is clear that some of these worksheets compact nicely. I have used a strategy in the past that has worked for me. After a few months my directory begins to fill up with files of all sorts. What I did was to compact everything in my directory. (By using **cron** and **at**, I was able to schedule this in the wee hours of the morning when no one was using the computer). Over the course of the next week I had **uncompacted** the files that I really needed. At the end of the week, I backed up all files that were still compacted and then removed them from the system. In this way, I freed up some space in the short term by compacting everything in my directory and freed up space in the long term by removing a number of files from the system that I clearly did not frequently use. (Note also in the above display that the files which were compressed were replaced by a file with the same name but with a **.Z** extension. This is a common convention for compression programs so that the user can quickly distinguish the files that have been compressed. For the program **compress**, the extension is **.Z**, while for the program **compact**, the extension is **.C**.)

Odds N' Ends

In our experience, we have stumbled across a number of other ways for keeping our disk space under control. There is no coherent pattern here. We tell you about them on the off chance that you may find one or two of these observations helpful. Also, we are sure that you have come across ways of doing the same. If you have the time, we'd like to hear from you - how do you keep your disk space under control?

One obvious thing one can do is delete any programs from your hard disk that are rarely used. For example, we have a Fortran compiler that we had installed at one time. After a period of time, it became apparent that we rarely used it. We decided that the level of use did not warrant the space that it was taking on the system. So, we took it off and decided that if we did need it in the future, we'd deal with freeing up enough space to install it. Do you have all the BASIC modules installed? Do you use all of them frequently enough to justify keeping them on the disk? What about other applications? Do you have two (or three) data base programs on the system? Could you get by with just one?

Another thing to watch out for are slowly growing files that are hidden in the system. For example, if you have enabled some system accounting programs (called **acct**), there is a file called **wtmp** in the **/usr/adm** directory that keeps track of everyone who logs in and logs out. Thus, each time someone logs in or logs out, this file grows a little larger. Perhaps you should peek into this directory and see if the **wtmp** file is there. If it is and if it is larger than 50 or 100 blocks you might consider backing it up and then deleting it from the system. After it is deleted you should create an empty file called **wtmp**.

You can also take advantage of **linking** files. UNIX allows you to **link** files together. The effect of linking is to keep one copy of a file somewhere but to let other people have access to it as if there were multiple copies of it. For example, one of the people using our system

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keeps a file of extremely useful information in his directory. This file has dates, names, and phone numbers, and much of the information is useful for a couple of other people that use the system. In fact, over time, we have each gotten into the habit of putting important information in this file for future reference - it has become an informal communal data base of sorts. Those of us who use the file might be tempted to make a copy of it and put it into our own home directory. But this would waste space. Instead, we have linked this file to our directories and can access it as if it were a file in our own home directory. The advantage is that only one copy of the file is left on the system. (There are other advantages to this strategy, such as keeping the information consistent between the users.) Thus, you might run across times when linking a file to someone's directory is more efficient than simply making a copy.

You link a file by using the **cp** command with the **-l** flag. If you want to link a file called **foobar** in fred's directory to bill's directory, you would type:

$ cp -l /u/fred/foobar /u/bill <CR>

Another strategy that is quite useful under some conditions is to use certain archiving techniques. One example of an archiving system that can save you space is called the **Source Code Control System (SCCS)**. **SCCS**, in general, is often used when a project of some sort (programming, document preparation) gives rise to many versions of essentially the same thing. When programmers, for instance, build a software project they will write a program, fix bugs, enhance the program, adding this capability and then that capability, revamping it in one way and then another. By the time they are done, they have essentially 15 or 20 or perhaps hundreds of variations of the same program. These variations have quite a bit of overlap between them (we are talking about redundancy again). It is wasteful to save each version in its complete form because of the amount of overlap. **SCCS** allows one to keep a data base of these versions with the redundancy removed.

Conclusion

This completes our series on managing disk space. We've tried to touch upon some of the basic UNIX commands which are useful in managing your disk space. These commands include **df**, **du**, **find** and **compress**. We've also suggested techniques that should be helpful to the Fortune owner. No doubt there are many other techniques that we haven't thought of and we gladly solicit your ideas. If you know of ways that you find useful in this area, please send them along. Finally, we remind you again of our new software diskette called **Compressor's Delight** and suggest that you send for it so that you can begin using **compress** (This diskette also has other useful programs and some nice games).

Mark Palmerino

Random Notes

We currently have four disks in our software library. They're called *Fortune Utilities, D.C. Grab Bag, Compressor's Delight,* and *Fortune:Word Tutorial.* The first three are general utilities and games, and the fourth is a tutorial text for **Fortune:Word**. We will be describing each of them next month, but if you're in a rush, just send us $10 per disk that you desire. (Please don't send us a floppy -- we'll supply everything) Checks should be made payable to **The Cambridge Consortium** and mailed with your request to the return address on page 16.

In a recent issue, we described a command that you could use to print out the contents of your hard disk configuration block, with the note that this could save you considerable trouble later on. (The command is **rdconf /dev/hd00 | lpr <CR>**). In next month's issue, we'll explain how you may be able to use this information to resurrect your hard disk.

Finally, although there is no official word, there are rumors that the last quarter of 1985 will be a successful one for Fortune Systems. Several large contracts have been negotiated, and there has been substantial work updating systems for their large clients. When we have more concrete information on this, we will pass it along.

Using a Modem on your Fortune

In the past, we have written about how to use a modem with your Fortune computer. Modems have two purposes: for using your computer to call other computers or databases and for allowing other people to call into your system. We have found both of these applications to be invaluable. We use MCI mail to send electronic mail and check airline schedules. We often send articles to other Fortune computers for proofreading. We send telexes. As consultants, we have found it tremendously convenient to call into a client's computer and resolve problems without leaving our office. All in all, we are quite taken with the electronic age.

Previous articles have reviewed different communication programs and methods for wiring a modem to your system. In this article, we want to focus on a special issue -- using a single port and modem on your Fortune to call other computers and to receive calls from others. This saves a port and also hundreds of dollars for a second modem. Normally this is not possible, because calling out from your computer requires a "disabled port" and receiving calls requires an "enabled port". In terms of the **Define Device Connections** menu choices, one port needs to be defined as a host and the other as a terminal. Why is this?

When you sit down at your terminal, you get the message "Type in your name and Press <RETURN>:". Once you type in your name, you are prompted for your password. The cause of this is a program called **getty** which is always running and prompts for these things. **getty** watches the port to which your terminal is attached because the port is "enabled". On the other hand, your printer port is disabled. This prevents getty from running on it. You can imagine what bedlam would be created if your printer port kept sending the message "Type in your name and Press <RETURN>" out to the printer. It doesn't do this -- it just sits there waiting for you to send something out to it. When you want to have someone call your computer via the modem, it's the same as them attaching their terminal directly to your system -- your system needs to type out the login message for the remote terminal. In order to do this, you designate that port on your computer to accept a terminal. When you want to use your computer to call out, the modem port should be configured to call a host, which makes your modem port the same as the printer port -- just sitting waiting for something to tell it what to do.

The problem in getting one port to work for both purposes should be coming into focus. We need to have one port where the login message is waiting, but also have the modem be able to put the login procedure on hold while it is used to access someone else's system. Fortune has made it possible to do this by allowing you to give one port two different names. Typically these names would be /dev/tty?? and /dev/cul?? (e.g. /dev/tty04 and /dev/cul4). What follows are exact instructions for creating a single port input/output device.

First of all, you need the right kind of modem. The procedure is easiest with a Hayes or Hayes compatible modem. These modems can be wired using the Fortune suggested connections. Other modems will require special cables for proper operation.

Next, you need to choose which port you will be connecting the modem to. For the purposes of this discussion, let's say you'll be attaching it to port #4, which is commonly known as /dev/tty04. (If you are using a port other than #4, see the box at the end of this article for additional instructions). Login as manager and choose **S2 Change Device Definitions**. Then define port 4 as a terminal. Generally, if you know that everyone signing into your system will be using a Fortune computer, define the port as a Fortune terminal. Otherwise just enter OTHER. Set the baud rate to 1200. Now this port is set up for someone to login on. If you have a Hayes modem, set the dip switches with 3 and 8 down and all the others up. If you are using a version of For:Pro that is less than 1.8, you will need to shutdown your system and restart it before you can continue. (It is possible to reset your computer without shutting it down -- see Volume 2, Number 2 for details).

If you attach the modem to your computer at this point, it should be possible for someone to call into your system and log on. Note that once you've done this, it's a good idea to review the security on your system. Be sure that the root, manager, and newuser accounts all have passwords on them. When someone attempts to log on, you should see the CD light on your modem go on, and then you should see the SD and RD lights flash as they type. If this does not happen, your modem is not answering the phone correctly, and you should go back and check all of your cables.

Now we are at the point of making the port usable as a disabled (call *out*) device. There are two steps to this. Again, assuming that you are using port 04, follow these steps.

Login as root. Then check to see if /dev/cul4 exists by typing **ll /dev/cul4 <CR>** (<CR> means to hit the RETURN key). The response to this should be "/dev/cul4 not found". If it is found, you will need to call the new device something else, perhaps /dev/cul04. The name you use is totally up to you, however **/dev/cul4** is the normal convention. Once you have verified that a device does not exist called /dev/cul4, you need to check the **major** and **minor** code for the port you will be using. In this case, simply type: **ll /dev/tty01 <CR>**. You will see a listing that resembles the following:

```
crw--w--w- 2 manager  6,  2 Jan  2 10:54 /dev/tty04
```

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Modem,

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After the word manager, you can see **6, 2 Jan 2**. The first number, 6, is the **major** number. The number that follows it is the **minor** number. When you type the following **mknod** command, you will use the same **major** number, and you'll add **128** to the **minor** number. In the example above, the **major** number is **6** and the **minor** number will be **2 + 128**, or **130**. If your **/dev/tty04** listing is identical to the one above, the **mknod** command will be as follows:

mknod /dev/cul4 c 6 130 <CR>
chmod 666 /dev/cul4 <CR>

If not, be sure to substitute the correct **major** number for the number 6, and the correct **minor** number for 130 (the **minor** number you use should always be between 128 and 133).

The **mknod** command creates a special file which refers specifically to port 4 (the mknod commands for other ports are given below). It is different than using the **cp -l** command, because the new device has special significance for For:Pro. The **chmod 666** command makes it possible for anyone to access the new device.

For the second step, you need to create a set of commands that will be executed every time you turn on your computer. This is done by creating a file in the **/etc/rc** directory. Each time the computer is turned on, any shell scripts in this directory will be executed if they end with the letters **.rc**. We talked about this some time ago with regard to the program **cron** (See Volume 1, Number 8). This is the shell script.

```
case $1 in
   down)
      :nothing
      ;;
   up|restart)
      stty -echo -nomdmints respectcarr iwtcarr hupcls \
      savemodes > /dev/tty04
      sleep 5
      ;;
esac
```

If you have the screen or sc editor, that's probably the best way to enter this file. If not, you'll have to use a different editor. (An early version of the screen editor is available on our **D.C. Grab Bag** and **Fortune Utilities** software disks. The most recent version with many additional features is available from Bell Technologies in Fremont, CA) Call the file **stty04.rc** and put it in the **/etc/rc** directory. This file will set a variety of options for your modem port. For details on what all of these arguments do, see pages 2-21 through 2-23 in the silver **Introduction to For:Pro** book. Once you've done both of these things, it's necessary to shut down your computer again. (Note: even if you are using a modem solely for people calling into your system, you may want to use an **rc** file like the one above with the line **stty hupcls > /dev/tty04** included. This argument hangs up the modem when people sign off the system. This insures that your modem will not be left off hook.)

To test out what you have done, restart your computer and then login as root. Once you have the # prompt, type **ps -x <CR>**. This will list all of the things the computer is doing. In the second row on the far right, you should see **/etc/init**. Farther down on the list, you should see the same thing. If you don't see an init after the first row, try turning off your modem and typing the **ps -x** again. If you see it now, there is a probably a problem with the wiring to your modem. If that's not the case, review these instructions and the **rc** file to be sure you haven't made any mistakes.

If you do see the second **init** in the list, try using your communication package (**ite, handshake, kermit**) to connect up to port **cul4**, which may be designated as **/dev/cul4**. You should be able to connect and use your modem as normal. (A good way to test this is just to type **AT <CR>**. The modem should respond "OK". You should also see the lights on the modem flicker as you type.) If this works, disconnect and then have someone try to call you to confirm that the "enabled" part of the port also works. This is all there is to it.

If you have a problem with this, remove the **/etc/rc/stty04.rc** file and the**/dev/cul4** file and everything should be restored to its original condition. We have used this set up for some time with no problem.

Good luck.

If you are using a port other than number 4, use the following chart to determine the name of the **.rc** file you should create and the **mknod** command. In the second to last column, you will see the letter M, which stands for the **Major** number. To determine the correct **Major** number, type the **ll /dev/tty0? <CR>** command described above. Note the **Major** number in the listing, and use exactly the same number in the **mknod** command. The last column shows the **Minor** number you will use. These numbers will always be correct.

1	stty01.rc	mknod	/dev/cul1	c	1	129
2	stty02.rc	mknod	/dev/cul2	c	M	128
3	stty03.rc	mknod	/dev/cul3	c	M	129
4	stty04.rc	mknod	/dev/cul4	c	M	130
5	stty05.rc	mknod	/dev/cul5	c	M	131
6	stty06.rc	mknod	/dev/cul6	c	M	128
7	stty07.rc	mknod	/dev/cul7	c	M	129
8	stty08.rc	mknod	/dev/cul8	c	M	130
9	stty09.rc	mknod	/dev/cul9	c	M	131

In the rc file itself, you will have to make a change in the line that begins **stty -echo**. Note that at the end of the line it says **> /dev/tty04**. You will have to substitute the number of the port you are using for the number 4. Be sure to change the name of the **/dev/cul??** file in the **chmod** command also.

Josh Lobel

Fancy Printing with Fortune:Word

Using the special wheels file

We recently explored some of the special printing functions of **Fortune:Word** and came up with some interesting ideas. A friend had typed a letter in French into the computer and wanted to print the text with all of the accents in place. The accents were on the printwheel of the QUME printer we have, but we didn't know how to make them print properly. While looking at the printwheel, we noticed other characters that we wanted to print out but they were not on the Fortune keyboard. That started us thinking about our IDS dot-matrix printer. The directions say that it can print in expanded type as well as the normal 10, 12, and 15 characters per inch that are selectable from **Fortune:Word**. The expanded type is quite large and very good for headings and titles. It can also print with proportionally spaced letters and in draft and correspondence modes. Although it is not apparent that accent graves and double-width characters are similar, getting them to print out can both be approached with the same technique.

There are special **wheel** files located on the system which can translate characters that are included in a **Fortune:Word** text to other characters that will be sent to a printer. By manipulating the **wheel** file correctly, it is possible to gain added control over your printer. In order to explain how this is done, it is necessary to review some background information.

In the past we have mentioned a file called **/etc/printcap** which tells the computer about various kinds of printers that can be attached to the Fortune. This file is necessary because there isn't any standardization amongst printer manufacturers. The commands that tell one printer to print 12 characters per inch are invariably different for other printers. When you print a file, the computer first goes and checks what kind of printer you are using; then, it goes to the **printcap** file and sees what special codes are needed; and then it sends the file with the correct information to the printer. The last line of a printer entry in the **printcap** file specifies the name of the **wheel** file for that printer.

All of the **wheel** files are located in a subdirectory called **/usr/lib/wheels** which contains wheel files for all Fortune supported printers. The purpose of the wheel files is to allow you to change *fonts* on a dot-matrix printer, or use special printwheels or thimbles on a letter-quality printer. Typically they have entries for foreign language wheels and also special proportional space wheels for printers which can accommodate them. The wheel files function in two ways: first of all, they let you send a special string of characters to the printer to initialize a different font that will be used for the entire document (this is useful on dot-matrix printers); and second, they provide a translation table for individual characters. This second function is best explained using the "proportional space wheel" example.

On our Qume printer, there are certain typefaces which have had the letters on the daisy wheel rearranged so that they can all fit on one wheel. This is particularly true on proportional wheels. Once the letters have been rearranged, it creates a problem. A "d" on the screen now becomes a "@" when it's printed. If you have ever tried this, you'll know it looks like you're suddenly writing in a foreign language.

What the wheels file does is set up a **translation table** for each character. This means that when a "d" appears in your file, it is translated to the correct character for the printer. When a new printwheel is added, it may be necessary to translate every character in the alphabet. This is a typical section of the qume.wheel file:

```
# wp print wheel 1p on Qume
# Boldface P.S. (part number 82190 WPS).
>1p
a               "_"(I*10/120)
b               "
c               "/"(I*10/120)
d               "@"(I*12/120)
^YR             "q"(I*10/120)# registered
^YS             "f"(I*16/120)# copyright
^Y1             "s"(I*10/120)# degree
```

The **>1p** is the name of the printwheel that will be entered on the **Fortune:Word Print Menu** at the wheels selection. (In this example you would just enter **1p** on the menu. If you want to create your own wheel entries, be sure to use a number that is not currently used in the file. If you look at the four lines following the line >1p, you will see the letters "a", "b", "c", and "d" in the lefthand column. In the middle column are the characters that these letters will be replaced with when your file is sent to the printer. The right column contains information about proportional spacing, e.g. the number of units that the letter should occupy - "a" and "c" take up 10 units, while "b" and "d" are slightly wider and require 12 units. Although the spacing functions are interesting, they are not needed for what we are trying to do at the moment.

Working with special characters

Note that the last three rows in the above example list the first character as **^YR**, **^YS**, and **^Y1**. These special characters are included in order to print out special symbols that are included on the printwheel but not shown on the Fortune keyboard. (Because they are not on the keyboard, the **CTRL-Y** is needed to distinguish them from the regular alphabet.) In order to accomplish our mission, we will be employing a similar technique. We will be entering some special characters into the text, and have them replaced with other characters

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of our choice. The "^Y" is a **CONTROL-Y**, which is created by holding down the **CTRL** key while hitting the letter Y. The CTRL key works like the shift key -- it doesn't do anything until you hit another letter while it is being held down. We think of a **CTRL-Y** as a single character even though it requires pressing two keys -- just like you'd consider a capital **A** a single character even though it requires that you hold down the **SHIFT** key. In order to insert a character like this in **Fortune:Word**, simply hit a **CTRL-Y** (Nothing will appear on the screen), and then hit the letter of choice -- try hitting a period (this won't work with older versions of **Fortune:Word**). You should see a little arrow on the screen. Now try hitting a **CTRL-Y** followed by a comma. You should get an arrow pointing the other way. If this is confusing, we suggest you just give it a try. The characters that result can be inserted or deleted just like any other character.

Printing in special modes with a dot-matrix printer

Now that you have some background, let's get concrete. With our IDS printer, it is necessary to send the following letters in order to put the printer into expanded, or large-type, mode:

Large-Type CTRL-A
Normal size CTRL-B

We want to edit the file called **/usr/lib/wheels/ids.whl** to incorporate these commands. In order to do this, follow these steps:

1. Login as root
2. Change directories to **/usr/lib/wheels** by typing **cd /usr/lib/wheels <CR>**
3. Copy the ids.whl file so you retain the original copy by typing **cp -t ids.whl ids.whl.real <CR>**
4. Make it possible to edit the file by typing **chmod +w ids.whl <CR>**
5. Edit the file, preferably using the sc or screen editor by typing **sc ids.whl <CR>**

At the very beginning, you will see a line that says:

```
# Standard ascii character set
# wp print wheel 1 on IDS
>1
+init "[R,1,$"
```

You will insert the following two lines right after the line that says +init:

```
^Y. "^A"
^Y, "^B"
```

In order to insert the CTRL-Y, CTRL-A, and CTRL-B into the file using sc, you hit **i** for insert, then a CTRL-C, which means that the next character you type is going to be a control character, then the control character you want, like CTRL-Y. Once you hit the CTRL-Y, you should see the upcaret appear, followed by the appropriate letter. You will have to repeat this for each control character you enter.

Once you have entered these two lines, hit the ESC key to end the insert, the E key for exit and U key for update.

Trying it out

Now go into a **Fortune:Word** document and insert the CTRL-Y period before the text you want to have in large type. An arrow should appear before the text. Then go to the end of the text, and insert a CTRL-Y comma. This should produce an arrow pointing to the left. Everything between the two arrows will be affected.

If you look in the IDS manual, you may be able to get codes for other special functions that you want. You can just pick some CTRL-Y code to use to generate the special command characters.

The same technique is used for generating special characters other than the usual alphabet (e.g. foreign language accents and unusual symbols). The trick here

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is to discover what codes the printer needs to print the character. This may be found in the printer manual. If not, you may discover it by experimentation. If you look through the wheels file for your printer, you may see an entry for the character you are looking for -- just remember the appropriate **CTRL-Y** code. There are also some characters that use a **CTRL-N** code.

Using the init feature of the wheels file

The other way the wheels file can be used is by changing the line that starts +init. With our IDS printer, we have the following two modes:

Proportional spacing	CTRL-P
Fixed spacing	CTRL-F

An easy way to deal with this is to set up extra printwheels in the wheel file. Here are two examples:

```
# Proportional space mode
>4
+init "^P"

# Fixed space mode
>5
+init "^F"
```

Note again that when you insert the CTRL-P and CTRL-F (which are signified by the upcaret), it will be necessary to hit CTRL-C first.

Once you have inserted these lines into your wheel file, you can choose wheel 4 or 5 from the **Fortune:Word Print Menu**.

Using other printers

If you have a printer that is not one that is usually supported by Fortune (Fortune supports Diablo, Qume, NEC, Genicom, and IDS printers), it is possible, but somewhat tricky to get it to work with **Fortune:Word**. Many people get around this by telling the computer that they have a PLAIN1 or PLAIN2 printer. This will work for **Multiplan** and for basic **Fortune:Word** printing, but won't let you do anything as elaborate as changing the printing pitch. However, it may still be possible to play with the **wheel** file to achieve some fancy results when printing from **Fortune:Word**.

If you have some other kind of dot-matrix printer, you will need to modify the correct wheel file for that printer. If it is an unsupported printer, you may be able to modify the **/usr/lib/wheels/other.whl** file. If you want to know exactly what file to modify, follow these steps:

1. Login as root
2. Type **more /etc/devtype <CR>**. This will list your device connections. In the third column you will see a letter P for the row that contains printer information. If you have more than one printer, the printer numbers are listed just to the right. Note the name of the printer which appears in column two of the same row. Examples are **D630, QUME945, PLAIN1,** etc. Once you have identified the name of the printer and its abbreviation (e.g. D630 for Diablo 630), write down the abbreviation exactly.
3. Type **more /etc/printcap <CR>**
4. Once the file comes up on the screen, type a slash followed by the abbreviation, e.g. **/IDS132 <CR>**. This will search through this file for the word IDS132. It will say skipping, and move to the point in the file where IDS132 appears. Next hit the space bar until you see a line that reads: **:wh=/usr/lib/wheels/ids.whl**. Usually this is the last line in the entry right before you get a blank line. This line specifies the wheel file that will be used. Hit a letter q and you will be returned to the prompt.

Once you know the file to edit, look in the printer manual and pick out whatever codes you want to use to control the printer. (Note that certain control sequences need to be entered using their ASCII code. For instance, the **Escape** character is entered as **033**. This is the octal equivalent of character 027, which defines the **Escape** character). Besides putting in commands for expanded printing, it may be possible to put in the commands for changing the printing pitch. This would be done in the **+init** command in the wheel file, e.g. **+init "^C"**. You could then change the pitch by selecting the appropriate wheel file.

These techniques will not work when you're printing from anything other than **Fortune:Word**. It is the only program that uses the **wheels** file. In a coming issue, we will explain how you can apply some of these techniques when using **Multiplan** and other programs that use the standard **lpr** command. Hopefully this information will give you some new ideas about making your printouts more exciting.

Josh Lobel

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